

# National Safety News



22  
24  
30

The Goodyear Tire and  
Rubber Co.—Akron, Ohio

uses these **M-S-A**

**"Mechanical Noses"**

to SNIFF out

**COMBUSTIBLE GAS HAZARDS**

Combating hazards with proper safety equipment has been a long-standing practice at The Goodyear Tire and Rubber Company, Akron, O.

One of the scientific safeguards put into operation by this continuing safety program is the use of "mechanical noses" to detect explosive concentrations of butadiene gas. The "noses" are M. S. A. Combustible Gas Alarms. Operating continuously, these explosion-proof devices accurately sample the atmosphere at four points around the two 20,000 gallon storage tanks at the synthetic rubber plant. When gas concentrations build-up to 30 percent of the lower explosive limit, an alarm system, consisting of horns and flashing red lights on the panel board, alert operating personnel.

Since installation, the alarm system has given several warnings that have prevented gas concentrations from reaching explosive limits. In each case, the prompt, automatic signals gave workers time to take corrective action.

If you are concerned with combustible gas hazards, you'll find it worthwhile to investigate the many operating features offered by the M.S.A. Explosion-Proof Combustible Gas Alarm. Our bulletin No. DT-6 gives complete details. Write for a copy.

"MECHANICAL NOSE" at  
HUNTER PACKING COMPANY

"MECHANICAL NOSES" at  
STANDARD OIL CO. (OHIO)

#### MINE SAFETY APPLIANCES COMPANY

Braddock, Thomas and Meade Sts., Pittsburgh 8, Pa.

At Your Service: 48 BRANCH OFFICES in the UNITED STATES

MINE SAFETY APPLIANCES CO. OF CANADA LIMITED  
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Call the M.S.A. Men on your every safety problem  
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# WILLSON®

## DUST HOOD

### Lightweight and Comfortable

Can be used with any WILLSON single filter respirators for dusts, mists, gases, vapors. Available without respirator.

Wide Vision, acetate windows—33 square inches.

Windows interchangeable, replaced in a matter of seconds.

Canvas hood with snap fasteners on window.

Style 1

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Straps with spring clips to gather hood around body and under arms.

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 Dependable Products Since 1870

For prompt safety service  
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# NATIONAL SAFETY NEWS

SEPTEMBER 1951

Vol. 64, No. 3

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lace-to-toe  
comfort at  
optional

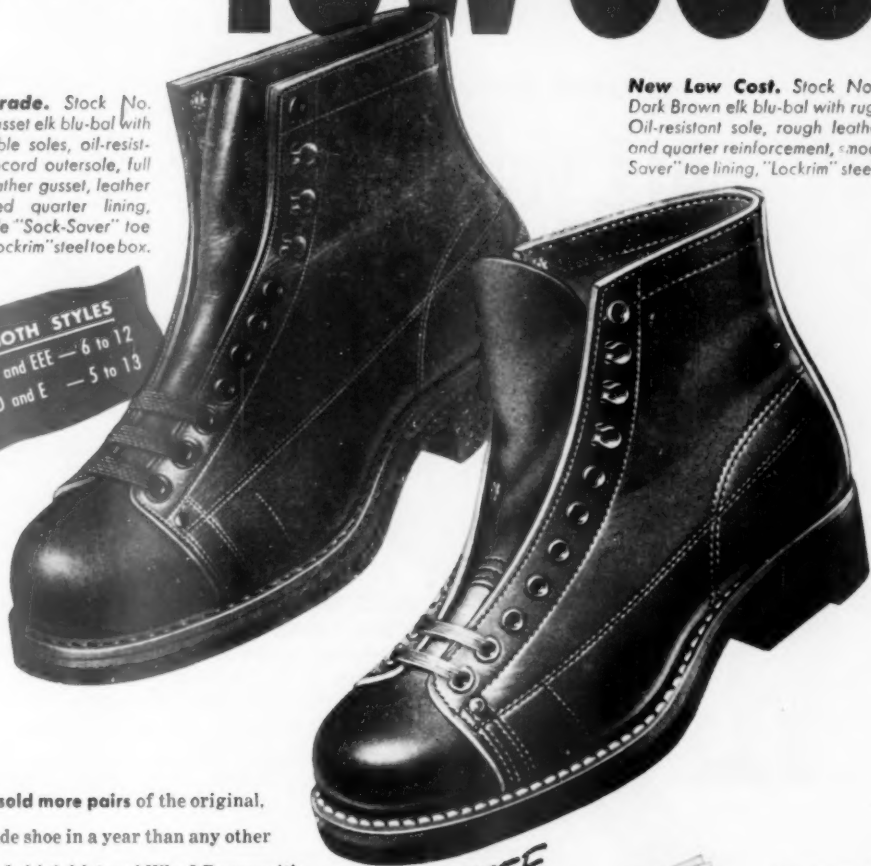
# low cost

**Top Grade.** Stock No. 1310—Russet elk blu-bal with full double soles, oil-resistant Neocord outsole, full grain leather gusset, leather reinforced quarter lining, horsehide "Sock-Saver" toe lining, "Lockrim" steel toe box.

**New Low Cost.** Stock No. 1210—Dark Brown elk blu-bal with rugged slab Oil-resistant sole, rough leather gusset and quarter reinforcement, smooth "Sock Saver" toe lining, "Lockrim" steel toe box.

**BOTH STYLES**

C and EEE — 6 to 12  
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We've sold more pairs of the original, top-grade shoe in a year than any other style in Lehigh history! Why? Because it's built like an athlete's shoe... for speed as well as stamina. Now you've asked for the same comfort and safety at an optionally low price. And here it is. Both styles have a soft, unlined upper and a tough, anti-skid, oil-resisting sole. You'd have to be a shoemaker to tell them apart, although the new Stock No. 1210 is even lighter and more flexible than the original. Where men resist a heavy, clumsy work shoe, try these. Either style is one of the best buys in safety shoes today!

FREE  
pay envelope  
stuffers



This convincing leaflet tells your men how they can save by wearing safety shoes in and outside the plant. Write on your company letterhead for a quantity to cover your payroll.

## LEHIGH

SAFETY SHOE COMPANY  
ALLENTOWN, PA.

# DUALOC\*

**gives you  
ALL you  
pay for  
... and MORE!**



## STRAND-LAID

Made from right regular lay  
preformed wire rope of  
improved plow steel with IWRC.  
For general sling use.

## CABLE-LAID

Made by laying up seven  
individual preformed  
improved plow steel  
wire ropes all with IWRC.  
Gives extreme flexibility.

## SAFETY

## STRENGTH

## EFFICIENCY

**ACCO Registered Wire Rope Slings** are built for safety. Safe for men to handle because wire ends are permanently secured under a steel collar. Safe to use because the endings will not pull out. They will outlast the rope.

**STRENGTH**, the full catalog strength of the rope is assured, because in making the DUALOC ending the rope is not damaged or distorted. Safety factor is 5 to 1. Proof-testing at twice rated capacity is further assurance of satisfactory service.

**EFFICIENCY** of DUALOC is high. By developing rope's full strength, frequently smaller diameter rope costing less can be used. The neat DUALOC ending snubs closely, is easy to rig, and is always "open" for inspection. It saves time and energy. You'll save money with ACCO Registered WIRE ROPE SLINGS.

**See your distributor today or write for full information on DUALOC and other ACCO Registered WIRE ROPE SLINGS**

\*Trade Mark Registered



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**ACCO**

Wilkes-Barre, Pa., Chicago, Denver, Houston, Los Angeles, New York,  
Philadelphia, Pittsburgh, San Francisco, Bridgeport, Conn.

**AMERICAN CHAIN & CABLE**  
WIRE ROPE SLING DEPARTMENT

TRADE  
MARK



*In Business for Your Safety*



# An Extra Lung for A Man

## HAVING TROUBLE BREATHING



The amount of work a man can do goes *down* when foul air comes *in* or the heat goes *up*. Are you giving your workers the equipment that will keep them efficient even when working in hot or noxious fumes?

Many concerns regard Coppus Blowers as "production tools" as well as "safety equipment". They help men to do more work and better work.

You can find in the Coppus line the right blower or exhauster for each "bad spot"—or perhaps one type will handle a variety of jobs. In addition to man-cooling and removing

fumes from confined places, Coppus Blowers are used for cooling and drying materials and equipment. They are portable . . . efficient . . . built to Coppus "Blue Ribbon" standards of construction and workmanship in order to withstand severe usage.

Check and mail the coupon for specific information. Coppus Engineering Corp., Worcester 2, Mass.

Sales Offices in THOMAS' REGISTER. Other "Blue Ribbon" Products in BEST'S SAFETY DIRECTORY, CHEMICAL ENGINEERING CATALOG, REFINERY CATALOG.



COPPUS ENGINEERING CORP., 329 PARK AVENUE, WORCESTER 2, MASS.

Please send me information on the Blowers that clear the air for action.

☐ in tanks, tank cars, drums, etc.

☐ in underground cable manholes.

☐ in airplane fuselages, wings, etc.

☐ on coke ovens.

☐ on steam-heated rubber processes.

☐ on boiler repair jobs.

#### COOLING:

☐ motors, generators, switchboards.

☐ wires and sheets.

☐ general man cooling.

☐ around cracking stills.

☐ exhausters, welding fumes.

☐ stirring up stagnant air wherever men are working or material is drying.

NAME .....

COMPANY .....

ADDRESS .....

CITY .....

(Write here any special ventilating problem you may have.)



# Who was the real Fall Guy?

► The man who fell on the slippery floor?

or

► The man who owned the building?

Everybody laughs when a fat man falls.

But it isn't funny to the fat man. Nor to the thin man or the slim woman. Or whoever else breaks a bone, falling on a slippery floor.

It isn't much of a joke to the building owner, either. He turns out to be the real "Fall Guy" when he is haled into court.

If you want to avoid negligence suits, call your LEGGE Safety Engineer today. Without cost or obligation, he will make an on-the-spot survey of your floors, show you how you can have gleaming surfaces without slipperiness.

Ask him about other companies, plants and institutions which have reduced slip-fall accidents up to 98%, at the same time saving 50% on material and 25% on labor. This analysis service is FREE.

Don't wait for trouble—act today! Write WALTER G. LEGGE COMPANY, INC., 101 Park Ave., New York 17, N. Y. Branch offices in principal cities. In Toronto—J. W. Turner Co.

## FREE BOOKLET

MR. HIGBY LEARNED ABOUT SLIPPERY FLOORS—the hard way. Send for this easy-to-read entertaining booklet. Full of facts about floor upkeep. Just fill out and mail the coupon.

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Please send me a free, no-obligation copy of your Mr. Higby book.	
Signed _____	
Firm _____	
Street _____	
City _____	State _____

YOU'RE SAFE WHEN YOU HAVE  
**LEGGE**  
TO STAND ON



**LEGGE SYSTEM**  
of Safety Floor  
Maintenance

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These 3 Macwhyte Slings  
look alike but they're different!

Assembly E-2 Single-part body

### THE MONARCH SLING

Made from a single-part of Monarch Whyte Strand Wire Rope. Many sizes and types.

Assembly E-2 6-part flat-braided body

### THE DREW SLING

Braided from one endless wire rope — very flexible and kink-resistant. Many sizes and assemblies.

Assembly E-2 8-part round-braided body

### THE ATLAS SLING

Made from endless right and left lay wire rope. Hugs the load, gives maximum flexibility and safety. Many sizes and types.

Get the sling that's a  
"perfect fit" for your needs  
from Macwhyte's wide variety  
in size and construction

All three slings shown above are of the same basic type. But the legs or bodies of each are of different construction and flexibility — to meet various service conditions. These slings *only indicate* the wide variety in sizes and styles of Macwhyte Slings. All are custom-made to your order — in any length. Why not get the benefit of our experience in saving time and money for hundreds of satisfied users. Call any Macwhyte distributor or write Macwhyte Company today — about any sling problem you have. Catalog available on request.

### MACWHYTE COMPANY

2902 Fourteenth Avenue, Kenosha, Wisconsin

Manufacturers of Internally Lubricated PREformed Wire Rope, Braided Wire Rope Slings, Aircraft Cables and Assemblies, Monel Metal and Stainless Steel Wire Rope. Distributors throughout the U.S.A. and other countries. Mill Depots in the following cities: New York, Pittsburgh, Chicago, Minneapolis, Fort Worth, Portland, Seattle, San Francisco, Los Angeles.

600-15

Member National Safety Council

For cranes and hoists  
use PREformed  
**MONARCH WHYTE STRAND**  
**CRANE ROPE** made by  
**MACWHYTE COMPANY**





**New Guided Missile Takes Off...** This newest anti-aircraft missile, soaring upward on its supersonic flight, is launched, steered and exploded by electronic control. These powerful missiles blast high-flying enemy aircraft out of the sky. The control devices were developed by the Bell System's research and manufacturing units—the Bell Telephone Laboratories and Western Electric Company—working together in traditionally close relationship. This guided missile assignment for the Army Ordnance Corps is just one of many important military projects now entrusted to the **Bell Telephone System.**



In form



in cost

and in



utility

Wherever sparks fly or dust accumulates, goggles or glasses stay dirty and dangerous unless you make it *easy as possible* to clean them.

Each MAGIC LENS TISSUE sheet is over 50% larger than usual . . . yet *each sheet costs less*. Made right, priced right; no wonder it has swept the alphabet of industry from American Can to Zenith Radio. No wonder it is used in the most exacting laboratories in the United States; for the paper is, without question, the finest that can be made. *Yet it costs less*. The answer is in the volume from satisfied users.

*Magic Lens Tissue*  
U.S. PAT. OFF. SILICONE TREATED

is the answer to the  
Safety Man's Nightmare

The simple, compact dispenser is NOT MUCH BIGGER THAN A MAN'S FISTS. No moving parts. No bother. No waste. No fluid. No complicated dispenser or cumbersome cabinet. Takes instantly the interfolded jumbo-sized, super-strong sheets and dispenses them one-by-one . . . and at a great saving.

MAGIC LENS TISSUE polishes as it cleans. Gives longer clarity, makes cleaning easier, better, faster, more lasting. And as easy as lifting a finger. Go modern. Go Magic! A lot more safety for a lot less money. Wire or write us, or order through your Safety Supplies jobber today. Complete your installations now.

Each carton (6 Refill packets of 800 jumbo-sized sheets) is a 4,800 sheet attack on dust, dirt, lint and smears that can pay for itself a thousand times over. Yet each carton costs only \$8.40. And the dispensers cost only \$2.50.

The Silicone Paper Company of America, Inc.  
General Offices: 230 Park Avenue, New York 17, N. Y.

# ✓ WHOSE FAULT?



- ☐ HIS OWN
- ☐ HIS FOREMAN'S
- ☐ MANAGEMENT'S

## 1 SELL EYE SAFETY TO EMPLOYEES

Ask your distributor's representative to show you the kit of posters, pay envelope inserts, PA system scripts and other material that sells workers forcefully on *desire to use* proper safety eyewear.

## 2 SAFETY GLASSES FOR EACH JOB

A complete range of Bausch & Lomb safety eyewear, engineered to meet the most rigid tests for each job classification in your plant.

## 3 PROTECTION PLUS CORRECTION

For at least 50% of your workers prescription lenses are necessary to working efficiency as well as to safety. Your B&L distributor offers prompt prescription service on all types of industrial eyewear.

**E**YE accidents happen to those who invite them, sure—but are you sure this man understood the consequences of working without safety eyewear?

Casualty companies have long agreed that a *total* eye safety program must include education of workers by management.

Bausch & Lomb is prepared to assist with a forceful educational program. It's part of a *total* eye safety service you can put into operation immediately. Write Bausch & Lomb Optical Co., 681-9 St. Paul St., Rochester 2, N. Y.

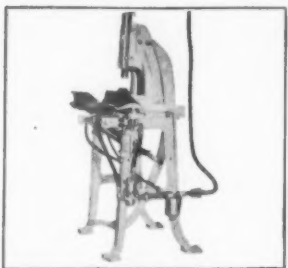


BAUSCH & LOMB  
*Safety Eyewear*

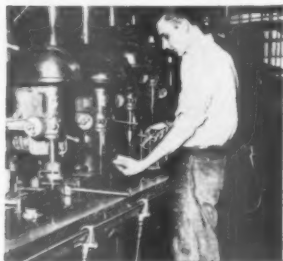
## Airways to Greater Safety via Schrader®



**Air Ejection Sets**—can increase safety of hand fed machines 50%. The combination of Schrader Air Ejection Sets and Schrader Power Press Controls can make the machine practically foolproof.



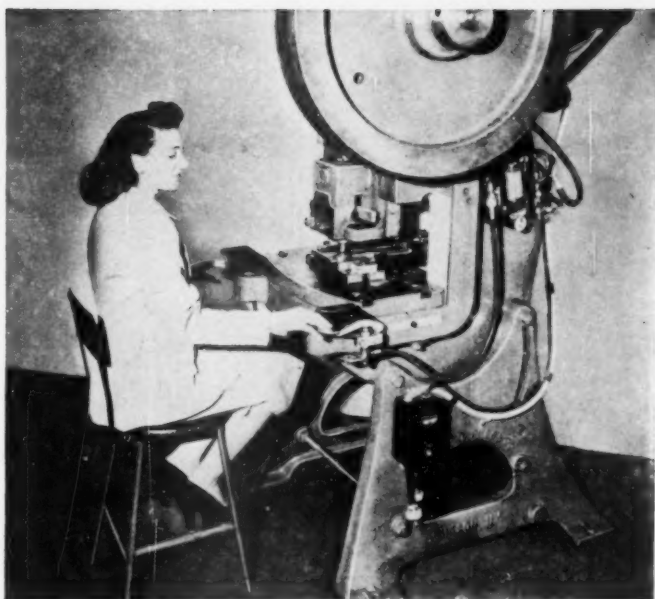
**Kick Press Controls**—eliminate fatigue by substituting more efficient air power for foot power. There is a Schrader pneumatic control for hand operation, foot operation or both.



**Blow Guns**—are safer if you use a Schrader gun equipped with an adjustable tip. With this tip the flow can be controlled, avoiding the "full blast" that often results in serious eye injuries.

Air Cylinders • Operating Valves •  
Press & Shear Controls • Air Ejection  
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Hose Reels • Pressure Regulators &  
Oilers • Air Strainers • Hydraulic  
Gauges • Uniflare Tube Fittings

**Schrader**  
PRODUCTS  
CONTROL THE AIR



## Keep hands out of danger zone with this **TWO HAND** press control

**Control becomes inoperative when either hand operating valve is tied down**

Here is a power press control that is definitely a two-hand device. A special cutout valve eliminates the possibility of tying down either hand operating valve to obtain one-hand operation.

After the work is placed in the machine the operator must depress both hand operating levers at the same time for the machine to operate. This means that the hands, both of them, must move out of the danger zone in order to operate the levers.

No longer is it necessary to resort to

mechanical monstrosities to make power press operation safer. And with the Schrader Control no effort is necessary to operate the levers. A light touch does the work.

Wherever there is a power press, there is an opportunity to increase safety by installing a Schrader Control.

Ask us to help you determine what will best fit your needs. Send us a letter outlining your particular installation requirement, your idea, or fill out the coupon below.

Variations of this control can be applied to most any type machine for greater safety, and increased production.

**Mail this Coupon Today**

**A. SCHRADER'S SON**

Division of Scovill Manufacturing Company, Incorporated  
452 Vanderbilt Avenue, Brooklyn, N. Y., Dept. R-1

Please send me further information on

- |                                               |                                       |
|-----------------------------------------------|---------------------------------------|
| <input type="checkbox"/> Power Press Controls | <input type="checkbox"/> Air Ejection |
| <input type="checkbox"/> Kick Press Controls  | <input type="checkbox"/> Blow Guns    |

Name \_\_\_\_\_ Title \_\_\_\_\_

Company \_\_\_\_\_

Company address \_\_\_\_\_

City \_\_\_\_\_ Zone \_\_\_\_\_ State \_\_\_\_\_



# B R E C K

## W A T E R   R E S I S T A N T   C R E A M

Breck Water Resistant Cream, when applied to the skin, forms a protective film which is resistant to the action of water and water solutions. It spreads easily, leaving a protective film which is not slippery, sticky or "heavy". Breck Water Resistant Cream is recommended for the industrial and professional worker whose skin is frequently in contact with water or water solutions, such as liquid coolants, emulsified cutting oils, mist and spray from alkali baths and plating solutions, flux fumes, cement and lime. An application of Breck Water Resistant Cream is effective for three to four hours.

*A Breck Industrial Preparations Booklet*



*will be forwarded to you upon request.*

JOHN H. BRECK, INC. • MANUFACTURING CHEMISTS • SPRINGFIELD 3 MASSACHUSETTS  
NEW YORK • SAN FRANCISCO • OTTAWA CANADA





*In safety and comfort  
I work all day  
Then proudly wear  
These shoes for play*

They're **NEW**  
**Iron Age**  
*Women's*  
**SAFETY MOCCASINS**



No. 605  
Sizes 4-10 Widths A-D

**... SUPREMELY COMFORTABLE**

Once again Iron Age has the outstanding steel toe safety shoe in the women's line. It's a smartly styled moccasin oxford, durably constructed, easy on the foot and eye. It's built around an *entirely new* last, incorporating ideas recently developed to produce a better fitting and more comfortable women's shoe.

No. 605 is a genuine Goodyear welt. Has handsome brown leather uppers—soft, supple and dressy. Outsoles are the famous "Leather-plus", especially tanned and treated to wear many foot miles longer than ordinary oak or vegetable tannage. A low rubber heel contributes to all-day foot ease.

Best of all this distinctive model is a natural to boost your coverage, especially since *it's priced far below retail levels*.

Get your stock order in today's mail. Your women workers will thank you for looking after their foot safety and comfort.

**IN STOCK  
IMMEDIATE DELIVERY**



*The Safety Shoe for  
Industrial America*

**Iron Age** DIVISION  
H. CHILDS & COMPANY, INC.

PITTSBURGH 22, PA.

# THE BIG SHOW



**19,000 SQUARE FEET OF SAFETY AND ALLIED EQUIPMENT  
TOP NAME MANUFACTURERS**

*See*  
**THE EXPOSITION  
NATIONAL SAFETY  
CONGRESS**

**CASINO ROOM,  
CONGRESS HOTEL  
EXHIBITION HALL,  
STEVENS**

The largest display of accident prevention products ever brought together has been arranged for the Exposition this year. Innumerable new developments await your inspection. If you have an equipment problem you are bound to find the solution at this convenient assembly.

The entire Casino Room at the Congress Hotel and the Exhibition Hall at the Stevens have been set aside for the exhibitors—188 booths.

For your own professional protection don't miss seeing any of these interesting displays. Hundreds of trained technicians will be on hand to help you and show you their equipment. Say, as thousands of others say—"See you at the Exposition."

**39<sup>th</sup> NATIONAL SAFETY CONGRESS AND EXPOSITION  
CHICAGO, OCTOBER 8-12, 1951**



## **A ONE MAN "FIRE ENGINE"**

*—the Kidde Dry Chemical Wheeled Extinguisher*

You *can* control a roaring fire in inflammable liquids, live electrical equipment, textiles or L-P gas. The Kidde 150 Pound Dry Chemical Wheeled Extinguisher packs a fire-fighting wallop that brings large fires under control quickly and easily.

The new "instant flow" hand control enables you to beat back fire with a long range "straight" stream... or to blanket the fire completely by

the wider coverage which you get from the improved "fan" pattern.

One man can wheel this extinguisher through a standard doorway... apply 150 pounds of fire-smothering dry chemical in less than one minute.

Write for complete information on this new Kidde Dry Chemical Wheeled Extinguisher... or the full line of Kidde fire extinguishers and built-in systems.

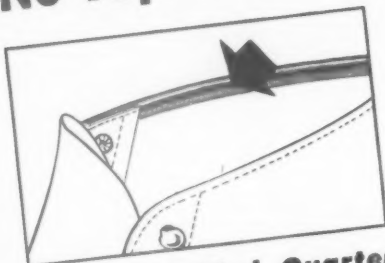
# **Kidde**

**Walter Kidde & Company, Inc., 945 Main Street, Belleville 9, N. J.**

**Walter Kidde & Company of Canada, Ltd., Montreal, P. Q.**

*There's always something  
NEW at HY-TEST!*

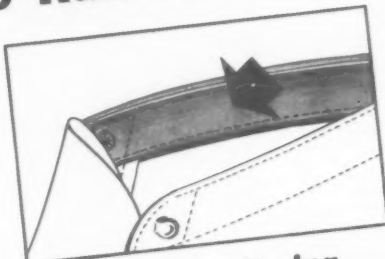
# NEW FOLDED QUARTER on HY-TEST SLANT-EZE SAFETY SHOES No Top-Facing to Rub or Chafe



**Hy-Test Folded Quarter**

Hy-Test has just announced the addition of another comfort feature to its line of Slant-Eze top safety shoes.

These built-for-comfort shoes now carry folded quarters instead of the conventional top-facings (see cuts). This feature provides a less bulky, more flexible quarter-top, materially reducing the danger of ankle-rub and chafing.



**Ordinary Top-Facing**

VISIT HY-TEST  
BOOTH 95  
STEVENS HOTEL  
NATIONAL SAFETY  
CONGRESS, CHICAGO  
OCTOBER 8-12



*... Insure Workers' Feet in Sure Protection*

*with*  
**HY-TEST SAFETY SHOES**



# NATIONAL SAFETY NEWS

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SEPTEMBER 1951

## The Chicken or the Egg?

SCHOLARS used to do a lot of arguing about which came first—the chicken or the egg.

Some safety men do the same about safety and industrial relations.

It is often said that a good safety program makes an important contribution to good industrial relations. It is a clear and unmistakable demonstration of management's concern for the welfare of employees. It eliminates a large number of legitimate grievances. It brings top management, supervision and the employees in the shop into a clearly cooperative effort.

In even clearer terms, good accident prevention work reduces labor turnover, eliminates anxieties induced by hazards, protects the economic position of both company and worker.

Many of the measures which can be justified solely on accident-prevention grounds also have by-product effects which contribute to good employee relations as well as to efficiency. Good ventilation, good housekeeping, good lighting, a sound sanitation and hygiene program—these are examples.

So much for the role of safety as the first-come the *producer* of good employee relations.

But it is also obvious that safety is the *beneficiary* of a good industrial-relations situation.

For example, in all the literature on the techniques of supervision in the safety program, there

is heavy stress on an approach in which the supervisor recognizes the value, feelings and intelligence of his employees. In the Human Factors in Safety series of slide films put out by the National Safety Council, to name only one example, it is emphasized again and again that the foreman must listen as well as talk, that he must give recognition of merit as well as place blame, that he must set an example as well as demand compliance.

I submit that it is out of such simple ingredients that a good industrial relations program is built. And it is absolutely clear that it will be difficult to make a safety program effective unless it is based on good, day-to-day, boss-to-worker relationships.

So, on these grounds, we must say that industrial relations comes first. Yet we have previously demonstrated that safety comes first. A contradiction?

No, I don't think there's any contradiction. We are confronted with two desirable goals—or are they means? As a practical matter, the issue of priority between them doesn't exist. Safety can be the creator of good relations. Good employee relations can be the producer of safety. We need only to further both aims simultaneously, feeling complete assurance that each will support the other.

Knowing this simple fact, we can ignore the speculative question of which comes first.

Ned H. Dearborn



Where Safety Leaders Will Meet

# 39th National Safety Congress and Exposition

CHICAGO, OCTOBER 8-12, 1951

## FAMOUS THOROUGHFARE

Chicago's Michigan Avenue will be the axis of the safety world during the week of the 39th National Safety Congress. At the left is The Stevens Hotel, the scene of 16 previous Safety Congresses. Here more than half the sessions and a large section of the Exposition will be held. Two blocks north along the Avenue is another headquarters hotel, The Congress, where many sessions and another section of the Exposition will be held. In the background, at the extreme right is 425 North Michigan—the Council's home.



**T**OPICS very much in the public mind are conspicuous in the program of the 39th National Safety Congress, the preliminary

edition of which has been mailed to Council members.

"Civil Defense and the Safety Engineer" provides the theme of

one of the important subject sessions arranged by the American Society of Safety Engineers. Atomic energy and the problems in-



## INVITATION TO SAFETY LEARNING

The Council's Library will be on duty at The Stevens and at the Home Office.



## THE COUNCIL AT HOME



Throughout Congress Week (and the other 51 weeks) visitors are welcome at Council Headquarters. From downtown hotels it can be easily reached by bus, taxi, or if you're feeling ambitious, a half-hour walk. The walkway along the south side of the Tribune Tower leads from Michigan Avenue to the building's second floor lobby.

involved in both peacetime and defense operations are discussed at several general and sectional meetings. Some aspects of the problem will be discussed at the Annual Meeting of the ASSE by Lieut. Allen W. Kenney of the Navy's Bureau of Medicine and Surgery.

On the program of the Annual Meeting is a former tennis star, Lieut. Commander Helen Hull Jacobs, now engaged in public relations work with the U. S. Navy. Another speaker will be Millard Caldwell, administrator of the Federal Civil Defense Administration. President Dearborn will present his Annual Message to members.

Following up the Council's recently announced program of increased aid to smaller businesses, a special session will be devoted

to this subject. Closely tied in with this important phase of the safety will be the session on Associations and Their Safety Programs.

Other subject sessions scheduled are: Conference Techniques, Coordinating Safety with Plant Engineering, Industrial Hygiene, Static Electricity, Public Relations and the Safety Engineer, and, of course, Maintaining Interest in Accident Prevention.

"Human Understanding—a Two-Way Communication" is the general theme of the Early Morning Sessions to be held Tuesday, Wednesday, Thursday and Friday mornings at 8:45. The sessions will be conducted by Dr. Irving J. Lee, professor of public speaking at Northwestern University's School of Speech. Dr. Lee is well known to safety audiences and his

public speaking lectures have been a popular feature of several previous Congresses. The outline of this year's sessions indicates that the discussion will go considerably beyond the mere mechanics of speech making.

The Safety Exposition will occupy every available foot of space in the Casino Room of The Congress Hotel and the Exhibition Hall of The Stevens. Both equipment and services for accident prevention, fire prevention, first aid and occupational hygiene will be on display, with technicians on hand to explain and demonstrate the various products. In addition to the exhibits of products commercially available there will be displays arranged by the National Safety Council and the Federal Government.

## THE CONGRESS SETTING



### CONGRESS MAP

(Numbers refer to hotels)

- |             |                |               |
|-------------|----------------|---------------|
| 9 Atlantic  | 11 La Salle    | 15 Allerton   |
| 8 Bismarck  | 13 Midland     | 21 Croydon    |
| 4 Brevoort  | 12 Morrison    | 19 Devonshire |
| 6 Chicagoan | 3 Palmer House | 18 Eastgate   |
| 2 CONGRESS  | 10 Planters    | 16 Maryland   |
| 7 Hamilton  | 1 STEVENS      | 14 St. Clair  |
| 5 Harrison  | 17 Alexandria  | 20 Seneca     |

The safety of Federal Government personnel, both civilian and military, will be discussed at several sessions during the week. The Sixth Annual Federal Safety Conference, sponsored by the Federal Safety Council, will be held Monday afternoon. Meetings will also be held by the Army, the Air Force and the Navy.

"Progress in Effectuating the Aims of the President's Conference on Industrial Safety" will be reported in a panel discussion. Represented at the meeting will be the U. S. Department of Labor, State Departments, Labor Organizations, and Business Organizations.

All women attending the Congress as delegates or wives of delegates are invited to attend a meeting and reception Monday afternoon in the Blackstone Hotel.

Off-the-Job Safety, a problem of increasing concern to all industries and community organization, will be featured at several sections, including the session on Public Relations and the Safety Engineer and the meetings of the Cement and Quarry, Industrial Nursing, Public Employees, Railroad and Textile Sections, as well as in the meetings devoted primarily to traffic and home safety.

Two new groups will hold meetings at the Congress this year. The fertilizer group of the Chemical Section has arranged a program and is making plans for a continuing organization. The Refrigeration Safety Committee will hold a meeting in cooperation with the Refrigeration Service Engineers Society.

Many companies with large delegations of key men at the Congress are scheduling company-wide safety conferences during Congress Week. Double benefits from Congress attendance are reported by many such companies.

# The New York Times Magazine



## Sarah Said It First!

By ROBERT CLAIR

**That famous definition of housekeeping is much older than you are, but don't accept it uncritically**

*Good housekeeping is a situation where there is a place for everything and everything is in its place.*

DO YOU THINK you were the first one to put those words together?

If you say you were—I can prove you're wrong!

It all started back about nine years ago when I undertook a routine research job on "Industrial Housekeeping." It was a conventional subject; and in assembling more than five years of reference material, I found an abundance of talks and articles.

As I read and analyzed the material, it boiled down pretty fast because there was so much repetition.

ROBERT CLAIR is Assistant Vice-President, Liberty Mutual Insurance Company, Boston.

Very early I found the description of "good housekeeping" that recurred and recurred and recurred. It became a refrain that developed into a theme song: "Good Housekeeping is a situation where there is a place for everything and everything is in its place."

The more I read them, the more I was impressed by this combination of words. They roll off the tongue smoothly. They are satisfying words—they sound authoritative and final. Innumerable speakers and authors have used them with zest and gusto.

Finally, I about decided that there was nothing for me to do but fall in line and give it another plug.

It occurred to me that it might be a good idea to start off with a description of an industrial operation or process where this descrip-

"A place for everything and everything in its place" dates back at least to McGuffey's reader, according to New York Times. Maybe the expression is even older. Want to carry on the research?

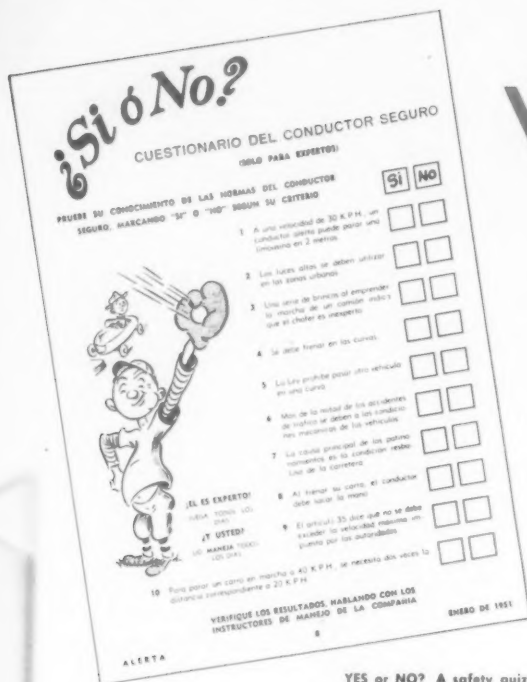
tion would apply. But I couldn't think of a production operation where this description would fit. One of the essentials of production is that tools and materials must move. If things don't move, there just isn't any production! Therefore, many things at any given time *cannot* be at rest in their "proper places."

The only place where there is "a place for everything and everything in its place" is a tool crib, a warehouse, a storeroom, or a correspondence file. And these are certainly not production areas.

But what has bothered me for years has been the question—"What joker actually started that phony definition?"—"Who said it first?" Its momentum has been terrific because those reverberating nine words have continued to roll through our professional literature for 15 years—and it's still going strong!

So, May 20, 1951, was a great day for my peace of mind. I picked up the *New York Times Magazine* and right there on page one the title of the feature article read "Lessons for Today: From McGuffey." Above the title was reproduction of the cover of *McGuffey's New Second Eclectic Reader* with facsimiles of four of its illustrations and their captions. The first of these is a drawing of two little girls—one handing something to the other and—lo and behold,—underneath this picture it says: "Sarah lends Mary a a thimble and some advice: 'I have a place for everything and I put everything in its place.'"

So, just to keep the record straight, you didn't say it first, because *McGuffey's New Second Eclectic Reader* was published in 1836.



YES or NO? A safety quiz in Spanish in the company's monthly magazine, "Alerta."

# Venezuelans Learn Fast

By A. R. TAYLOR

In thirty years their country has developed from a land of farms and small business to a leading producer of petroleum. And they're learning to operate safely

A. R. TAYLOR is Safety & Training Director of Socony-Vacuum Oil Co. of Venezuela. Born in Canada in 1919, he spent seven years in Trinidad, B.W.I., as safety officer of Trinidad Leaseholds Ltd., a British oil company. He joined Socony-Vacuum Oil Company of Venezuela in 1943.

**P**ROMINENCE in the oil world has established Venezuela as one of the leading Latin American republics. Situated in the northern part of South America, the country has a population of approximately 5,000,000, with some 600,000 residing in Caracas, the capital city.

Although many other resources are under development, particularly iron, the economy of Venezuela is today dependent upon oil, production of which is currently averaging 1,700,000 barrels per day, making it the world's second largest producer and the greatest exporter of this vital mineral.

Drilling training instructor stresses safety points during train'g sessions.



Guard rails and good housekeeping are important on mud tanks, too.



Hard hat, safety belt, tail line, belly band and safety shoes worn by derrick men.



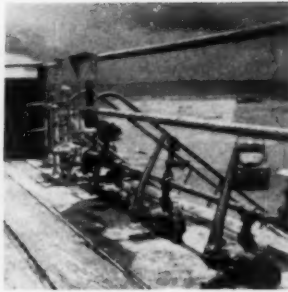




A record board shows the current accident experience at each camp entrance.



A "pot fireman" goes through the routine for lighting a boiler safely.



Blowout preventer controls are kept ready for instant action.

Thirty years ago, the people were engaged chiefly in agriculture and small businesses. Their exports consisted mainly of beef, sugar, cocoa and coffee. Little did anyone realize that a vast national fortune in "black gold" lay beneath the surface of their cattle ranches and plantations, nor could even the most imaginative foresee the enormous changes that were to take place as a result of its discovery and the subsequent development of the oil industry.

Today, Venezuelans man the drilling rigs, and operate the largest types of transport units hauling heavy oilfield equipment and even skid oil derricks several miles from one location to another. They are building and operating refineries, constructing

oilfield camps that are complete communities with modern houses, schools, commissaries, hospitals, power stations, repair shops, water and fuel systems. Many Venezuelans occupy senior positions in the industry.

It might be assumed that the accident prevention problems involved in this almost miraculous conversion from an agricultural to an industrial economy would be insurmountable. Actually, the workers in the oil industry have been absorbing the safety aspects of their work as rapidly as they have learned the multitudinous industrial techniques. This does not mean, of course, that there is no room for improvement.

The principles of accident prevention that were developed in the

United States bring the same results when applied in foreign countries. Safety work is more interesting abroad, not only because of the language problem, but also due to the entirely different background, education and outlook of the workers. The development of the accident prevention and fire protection program of Socony-Vacuum Oil Co. of Venezuela illustrates these assertions.

The safety and training section was organized in 1948. Training was combined with accident prevention and fire protection because the problems encountered were essentially the same, much of the safety function involving use of training techniques. At first the

—To page 84

Trailer with visual aid equipment provides a conference room for distant points.



All drivers are given skill tests as well as road and psycho-physical tests.



A volunteer fire-fighting crew practices extinguishing methods on a crude oil fire.



# Tuning In Accident Experience

By R. F. MILLIKAN

Experience points the way to future corrective measures—but be sure you have adequate data

**I**F YOU would divine the future," said Confucius, "study the past." This is especially true of accident prevention.

In all analytical statistical studies, whether to determine the cause of spoilage in a production line, transformer bushing failure, or occurrence of accidents, enough data must be included to eliminate the operation of chance occurrences and statistical inaccuracies of the comparison formula used.

The accepted formula for comparison of frequency of accident occurrences is:

$$\frac{\text{No. accidents} \times 1,000,000}{\text{Man-hours exposure}}$$

Many systems of comparison of the past and present over-all accident picture are in use today, including frequency, severity, number of employees involved, and many other factors, as well as innumerable combinations of these various factors. For the sake of simplicity, the examples given will deal only with the frequency rate.

One widely used method of using the frequency rate is to "wipe the slate clean," and start over again January first of each year. Comparisons are then made on a monthly basis, and also on the basis of "this year to date ending with the current month."

Longer range comparisons are frequently made with frequency on a calendar year time base. As "One swallow doesn't make a summer," it is also obvious that a

month, or even several months, doesn't necessarily produce a sound and solid accident experience. Therefore we will use the longer range annual base as an example.

Chart No. 1 represents graphs of the yearly frequencies of the Electric Utility Industry, the Southern Division of a holding company (includes 4 operating companies), one company (I), and operating districts A, B, and C of that company, from 1931 through 1950.

In this chart only the graphs of the industry, the Southern Division, and the last few years of Company I, show variations indicating trends; trends which can be analyzed to the point of determining some of the causes for these

variations in the light of changed conditions and situations. The graphs of Districts A, B, and C are incomprehensible.

The main purposes of statistical data are to accurately record past events, thereby showing variations and changes—either planned or unplanned; to indicate trends; to interpret changes as to their causes and to forecast the future from current trends, and thereby help determine future action. In this respect Chart No. 1 serves well the first two purposes for the larger units, but misses the smaller operating districts entirely. However, all corrective action or prevention measures must be applied at the point of work; i.e., on a district basis. Consequently, the most productive analysis of past experience

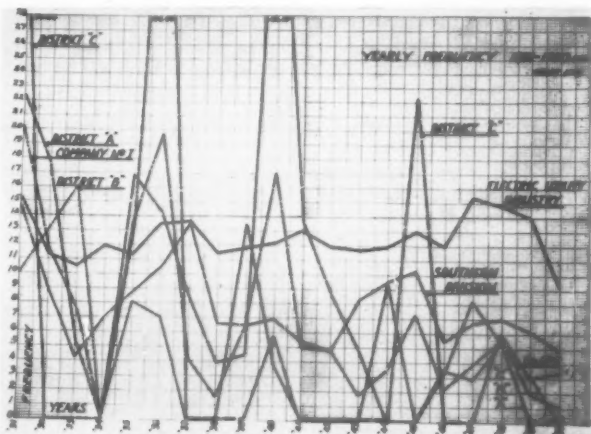


Chart 1. Even on large scale reproduction, this chart would be somewhat confusing. It serves well for the larger units but not the smaller operating districts—the point of work where the corrective action must be applied.

R. F. MILLIKAN is Safety Director, Kentucky and West Virginia Power Company, Ashland, Ky.

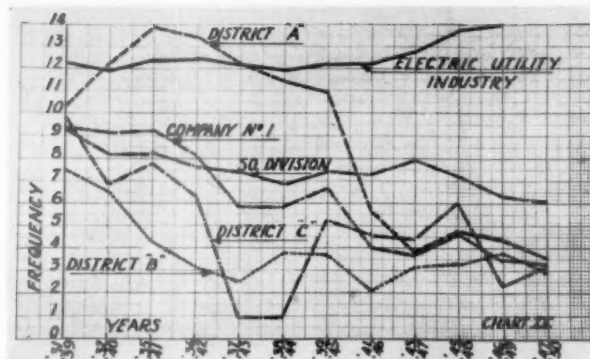


Chart 2. Here the chaos of Chart 1 has been turned to order. The horizontal base is the fewest number of years the exposure of the smallest unit exceeds 1,000,000 man-hours, ending each year. Definite trends for both large and small units are clear.

is also on a district basis. But unless such analysis is valid and justly comparable, it is useless.

In attempting to visualize trends and account for variations recorded for the smaller units (the district and the earlier years of Company I) we are unable to reconcile the graphs in Chart 1 with known conditions. Any of the districts would serve as an illustration. But let's just take one of them—District C for example.

From 1931 through 1950 the frequency for the Electric Utility Industry fluctuates between 9.26 and 15.41.

During the 20-year period the frequency in district C also fluctuates, but from 0 (zero) to 44.36. For 12 years (not consecutive) of the 20, District C chalks up a frequency of apparent perfection—zero. Some of the other years show frequencies of threes and fives. Other years show frequencies such as 13.31, 22.31, 32.81 and 44.36.

Can fluctuations of frequency from zero in 1944, to 22 in 1945, and back to zero in 1946 be considered as trends? If so, what changed conditions accounted for them? Was it change in personnel? Has the type of work and exposure to hazards changed that radically? Was accident prevention effort perfect in 1944 and 1946? Was accident prevention

work practically abandoned in 1945? Is accident prevention work futile and are injuries the result of uncontrollable factors?

After careful and detailed analysis of conditions and operations in District C we are forced to conclude that such extreme variations in frequency rate do not arise from changed conditions. In no sense do they reflect the valid accident experience of the district.

The problem now becomes one of first determining the cause of these extreme variations; and second of establishing a means of recording the accident experience of small operating units that varies significantly, only with changed conditions and situations; i.e., performance. Then, and only then, can accurate analysis and just comparisons of past and present performances be made.

A mathematical analysis of the frequency rate itself, and of the use of the calendar year time base sheds some light on this.

Why was 1,000,000 man-hours working exposure selected as a base on which to calculate the frequency of accidents?

Insurance companies' analysts prove that an exposure of 1,000,000 hours is necessary to establish a valid and sound base for accident experience comparison. Instead of this seemingly long exposure period creating a distorted

picture due to trailing averages being involved, it is any period short of 1,000,000 hours exposure that distorts. The shorter period exaggerates both the good and the bad; so that the good seems better than it really is, and the bad seems worse. The shorter the period, the greater the exaggeration.

For example: Company I worked 1,000,254 man-hours during 1950 with one disabling injury and a valid frequency rate of 1.00.

The month before the accident (April) they worked 81,702 man-hours without accident, and their frequency rate for that month was zero.

The month of the accident (May) they worked 87,475 man-hours for a frequency rate for that month of 11.43.

Obviously their accident performance in April, while perfect for that short time, should not be accepted as a proved value of performance.

Likewise, their accident performance in May, while certainly not equal to that of the previous month, should not be accepted as a proved value of performance and indicative of an accident per month, for each month to follow.

To carry this to a further absurd extreme; the day before the accident their frequency rate for that day was zero. The day the accident occurred their frequency rate was 252; but what does that mean? Is the figure of any value? Does it indicate a trend?

Consequently, periods shorter than 1,000,000 man-hours exposure, as are frequently used, cannot justly be used as a standard of comparison.

This being true, it then logically follows that the time period base that should be used in making accident experience comparisons and analyses should be, not monthly, and not annually, but some period at least long enough so that the smallest unit in the comparison or under analysis, has worked at least 1,000,000 man-hours, regardless of the calendar period required. In fact, the time

period should be elastic and vary from analysis to analysis to whatever calendar time period would permit the smallest operating unit to exceed 1,000,000 hours exposure.

Chart No. 2 is such a chart for the identical data given in Chart No. 1. The only difference is that Chart No. 1 uses a yearly horizontal base, and in Chart No. 2 the horizontal base is the fewest number of years that the exposure

of the smallest district exceeds 1,000,000 man-hours, ending each year. In this example, it required nine years, from 1931 through 1939, for District C to exceed 1,000,000 man-hours. From 1943 to date, District C has exceeded 1,000,000 man-hours exposure in just over three years—37 to 33 months—and the time base has been shortened to four years.

Even just a casual comparison of Charts 1 and 2 shows that the

DISABLING INJURIES DURING LAST 1,000,000 M-HRS WORKED ENDING EACH MONTH 1950									
TABLE NO.	CO.	DIVISION	1949	1948	1947	1946	1945	1944	1943
12	AL	A	2.34	2.11	2.11	2.11	2.11	2.11	2.11
17	AL	B	2.94	2.11	2.11	2.11	2.11	2.11	2.11
44	AL	C	6.67	5.53	5.53	5.53	5.53	5.53	5.53
6	AL	D	2.11	2.11	2.11	2.11	2.11	2.11	2.11
10	AL	E	2.11	2.11	2.11	2.11	2.11	2.11	2.11
DISTRICT									
54	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
57	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
58	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
59	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
60	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
61	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
62	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
63	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
64	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
65	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
66	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
67	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
68	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
69	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
70	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
71	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
72	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
73	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
74	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
75	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
76	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
77	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
78	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
79	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
80	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
81	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
82	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
83	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
84	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
85	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
86	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
87	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
88	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
89	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
90	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
91	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
92	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
93	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
94	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
95	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
96	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
97	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
98	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
99	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11
100	AL	D	1.11	1.11	1.11	1.11	1.11	1.11	1.11

Division—Table I; District—Table II

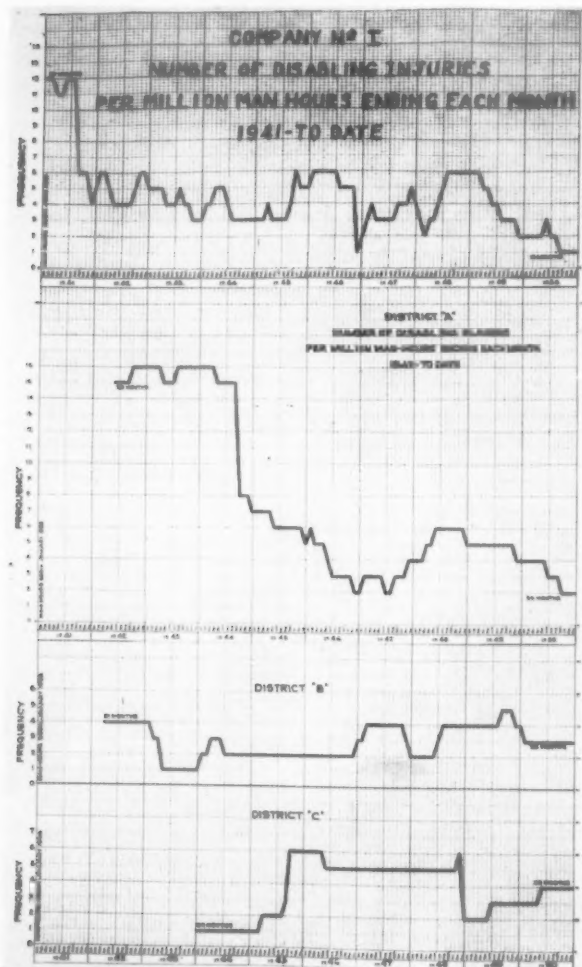


Chart 3 and Tables I and II are plotted on the basis of the number of disabling injuries in the last million man-hours worked, ending each month.

chaos of Chart No. 1 has been turned into order.

Furthermore, definite valid trends for both the small and large operating units are clearly established; reversals and changes in trends are unmistakable; and in most cases, a careful analysis of the circumstances and conditions prevailing at the time the changes took place has shown the causes that produced the change.

To be specific, let's look at the same three years in District C's experience on Chart No. 2 that we used as an illustration of the confusion pictured in Chart No. 1—1944, 1945, and 1946. In this instance, year 1944 covers their experience from 1938 through 1944; 1945 from 1939 through 1945, and 1946 from 1941 through 1946.

We find that the period ending in 1944 was truly an outstanding one with a valid frequency of .90—although not quite the perfection indicated by Chart No. 1. However, a valid frequency of .90 for that period is far more significant and exceptional than zero for the calendar year of 1944.

We find that the period ending in 1945, by comparison to their periods ending in 1943 and 1944, was truly a bad period. However, the true experience of that period produced a valid frequency of 5.22, which was under the valid frequency for Company I (6.67); under the frequency of the Southern Division (7.43); and less than

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# The SAFETY VALVE

## In the Midst of Life . . .

WHEN I SAW Harry Clatfelter at the convention of the International Council of Industrial Editors last May he looked at least as healthy as I did. But just a few days ago I got a letter from him with this startling lead: *Have you had your prostate gland checked recently?*

My irrepressible friend, who edits Hiram Walker's *Spirit* down in Peoria and recently endeared himself to the community by boosting a tree-planting program, was speaking from the heart. Profiting by the experience of a friend who recently had gone through the ordeal, Harry went to see an M.D. who hustled him off to the hospital and went to work.

"I'm just warning you, Carman," he writes. "Every old duck your age and mine (he's nine years older than I am) should be having a check. You can be, as I was, confident that you are in pretty good shape, but riding for trouble. . . ."

"I don't quite understand yet how this can be made into an article for NATIONAL SAFETY NEWS but you can make it, as I am doing, a personal mission warning oldsters to have a physical check up and try to meet trouble before it arrives."

That letter made me feel like Job after a session with Bildad the Shuhite and his other two cheerful pals. Last winter when I had a suspicion that my heart and blood pressure were crowding the safe limits, I saw the doc and all he said was "Relax, son." He didn't find any trace of Harry's trouble.

But I'm glad to pass the warning along.

*A recent book on home planning predicts that the garbage pail will soon become as obsolete as the old-time privy. But our neighbors, who have a fancy swill-disposal unit in the kitchen, used our garbage can to get rid of a bunny that died in their back yard.*

## "Occupational Hazard"

IMAGINE the embarrassment of a he-man going home on the bus or subway reeking with seductive scent acquired on the job!

That represented something new in union grievances in New York's garment industry. It happened when a large company started making perfumed brassieres.

After one week the male workers landed on the boss in a group. They claimed they couldn't get the perfume out of their clothes and wanted extra pay for the "occupational hazard" and the cost of getting their clothes dry-cleaned four times a week.

And that wasn't the worst of it. Some of the wives were suspicious about the source of the smell and the men also demanded individual letters to the women folks to correct any wrong impressions.

The unidentified clipping which somebody sent me didn't tell how the matter was settled.

## Good Fishing!

When the season starts, many a plant in regions where fishing's good has an absentee rate suggesting an epidemic. But Miniature Precision Bearings at Keene, N. H., has the problem licked, says *Modern Industry*. Any employee who gets back to work by 11 a.m., brings a fishing license and a creel or wet line to prove where he has been gets full wages for time lost.

He doesn't even have to produce his catch, if any.

The boss, as you might guess, is an ardent angler.

## In This Issue . . .

SO FAR AS I KNOW, Bob Clair is the first one to challenge that familiar definition of housekeeping — "A place for everything and everything in its place." If you stop to analyze it really doesn't apply to industry. Incidentally, it dates way back to McGuffey's Reader. (Page 20)

\* \* \*

With current conditions threatening the Western World's supply of oil from the Near East, Latin American sources are assuming increased importance. Venezuela has become one of the world's leading petroleum producing companies and accident prevention has been brought to the country along with drilling and refining equipment. (Page 22)

\* \* \*

Accident experience is valuable in planning your program, but be sure you have adequate data, R. F. Millikan warns. Less than a million man-hours may give a distorted picture. (Page 24)

\* \* \*

There's more connection between a grocery bill and a broken leg than you'd think, says Dr. Lydia G. Giberson who sympathetically dissects the human mind and emotions. (Page 28)

\* \* \*

That safety promotes efficient and economical operation is invariably taken for granted. This month's *Industrial Safety Panel* backs up this belief with some convincing case histories. (Page 30)

*Carman Fish*



# Emotions Can Be Killers

By LYDIA G. GIBERSON, M. D.

**Good and bad, emotions are man's constant companions. Understanding the destructive ones will reveal and forestall many accident causes**

**M**AN at his very best is a combination of emotions, and inevitably these emotions play a strong role in his performance of given tasks. Worries and fears are his constant companions.

It is inevitable, therefore, that these emotions will be reflected in the performance of his duties and will remain "eternal hazards" where these duties involve danger, because it is impossible that any normally constituted person can operate without the existence of subconscious feelings. This twilight zone of the mind must necessarily enter into every activity; therefore, its examination must form a very important basis in the over-all safety picture.

Fear dogs man's footsteps from the cradle to the grave. It is the father of the sense of insecurity, the breeder of instability, and a host of other ills with high sounding psychological names, but in its final analysis, it often reveals itself occupationally in an actual fear of the job. Hence, it would seem logical from a safety standpoint that the source of the fears should be ferreted out and allayed in so far as possible.

What does "safety" mean to me?  
The individual appears as a self-

sufficient unit, he is not merely a cog in the industrial machine, a check number on a payroll. The whole of his life is viewed as a working, breathing unity, a unity which comprises mental, physical, emotional, cultural, social, and economic aspects. Any factor whatever which threatens the sweetness and mature synchronization of all those aspects is a threat to the "safety" of the individual concerned. I believe every honest citizen has the inalienable right to a fully-rounded life of satisfactory work rising gracefully to a mellowed old age.

Now, such a definition of "safety" is, I know, a broader one than that contemplated in most accident prevention programs, but, from years of observation, I am certain that many of the causes of maladjustment and physical accident and disability rest in just such a broad panorama. There is the miracle of the body, that it breathes and dies; there is the miracle of the mind, that it thinks and acts; and there is the miracle of the emotions, that they direct and condition both the mind and the body.

## The Whole Picture

The narrower definition of physical accident is included in this larger definition. Accidents, except for those arising from the cussedness of machinery or from the physical environment, must, of necessity, come from a weakness or maladjustment in the victim. Bring emotional health to the employee, place him where his abili-

ties fit, and we, who are responsible for the lives and bodies of our workers, shall have a measure of control over the dangers of industrial life which now seems unbelievably improbable.

It is axiomatic that, if there were no human beings, there would be no accidents. The individual contributes 95 per cent of the factors necessary to make an accident. "You can build a guard-rail around a band-saw," says Doctor Forster, "but you cannot fence off mental attitudes." Some eight out of ten accidents are preventable if the psychological factors are controlled.

Emotional causes of accidents are deeply hidden. One must see the individual life as a whole in order to gauge the emotional maladjustment. Causes deep in the private life of the worker may bring about, in their logical sequence, accidents which are completely unexplainable on the surface. Fear, worry, hunger, illness, psychological unrest, fatigue, and boredom cost many lives. Anger, irritability, showing-off, exhibitionistic horseplay, group hazing, perverseness, and childishness, all take a toll in human accidents.

To reach the cause of these and to compensate for them, requires the whole picture of the individual and not merely that aspect of him which is uppermost in an industrial plant.

So, there is the need for the general approach, the broad picture, the complete life. The causes of accidents are quite often emo-

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DR. LYDIA G. GIBERSON is Personal Advisor, Metropolitan Life Insurance Company, New York. This article was presented at the 21st Annual Safety Convention of the Greater New York Safety Council, April 1951.



tional; no worker ceases to be a parent, or a lover, or a dreamer, or a hater, or a craven merely because he dons a pair of overalls. Emotions cannot be changed or rubbed out by an appeal to reason; their driving power comes from deep pressures within the mind, and mere logic cannot touch them.

### Back of the Accident

Apparently unrelated causes may bring about serious accidents. There is more between the size of a grocer's bill and a broken leg than the average individual's philosophy may yet have dreamed of.

Then, what are the basic requirements for an accident? I can simplify my answer by limiting the personal factors to two, each present in varying intensity. The first of these is the lack of physical coordination, the jam in the muscular control, the slow reaction time through which the individual fails to assess a situation and move in time to avoid an accident, the slowing up of physical response in a set routine.

The second basic requirement for an accident is inattention, perhaps the distraction which an alien emotional current sets up so that the job in hand loses focus and full meaning; perhaps the intrusion of a feeling of distance and unreality which maladjusted emotional factors bring about; perhaps mental and emotional preoccupation—but, at any rate, inattention.

These two factors are basic; if one takes for granted that the management has taken all proper safety precautions, then these two account, probably, for all accidents. The presence of either or both of them is a constant source of danger; if any preventive safety work is to be done, the affected individuals must be detected and treated *before* the accident or another accident occurs. The surest indication of the presence of these two factors is the minor accident, the cut finger, the damaged machine.

With some people these two fac-

tors are always present. Such people are "repeaters," the accident-prone. They form a more or less constant group. That accidents happen to this group and not to other groups is a logical result of the underlying causes which distract the attention and destroy physical coordination.

These are the two basic requirements for an accident, then; the lack of physical coordination and the lack of attention. With their deep-set emotional foundations they constitute the sign and signature of real and potential accidents. If we are to prevent accidents and not merely mop up after them, these two factors must be detected and removed upon their first appearance.

The epileptic, the late syphilitic with marked brain damage, the senile, the feeble-minded, the

### Early Traffic Death

On Route 40 near Norwich, Ohio, is the memorial shown in the accompanying photo, commemorating the first recorded traffic fatality in the state. The inscription reads:



IN MEMORY Christopher C. Boldwin, Librarian of the American Antiquarian Society, Worcester, Mass., killed on this curve August 20, 1835, by the overturning of a stage coach, this being the first traffic accident on record in this state. This tablet erected by the Norwich Troop No. 20, Boy Scouts of America, Rollin A. A. Allen, Scoutmaster, 1925.

"Maybe you can use this in connection with the story of the millionth traffic fatality," writes W. H. Adams, safety director for the Manufacturers Light and Heat Company, who sent the photo.

chronic alcoholic are more or less automatically excluded from positions of responsibility where their lack of control may be a source of danger. But there are other individuals so close to the normal that the detection of them must, many times, come unfortunately, only from the consequences of their defections. These more obscure types suffer from the commonest of human ailments, the emotional upsets which impair efficiency and limit us to one great man a generation. By some chance they have come to have exaggerated forms of our normal traits. They need sympathy.

There is an old adage, "Look in your heart and write," which might be changed to "Look in your heart and listen" in order to be the perfect principle for those guiding the safety of millions of employees. And human sympathy and human understanding will solve problems even wider than those of safety.

### Difficult Personalities

All of us fall into certain types of personalities. Some of these types are more prone to have accidents than others.

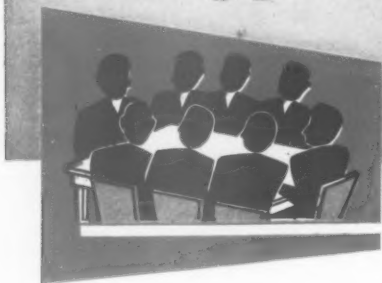
1. *The manic depressive* you have all met, even though you may have recognized him under a less oppressive title. He is the most human of men. Praise him, and he flies to the sky; criticize him, and he mopes in the depths. He is the cyclic individual with either the up or the down cycle predominant. During the upswing, he must be watched, for he lacks the skill to take things in the rapid sequence which his temporary mood requires.

2. *The daydreamers* fit not too well into our industrial civilization; they are constantly being jerked into the present by the inexorable demands of a practical and nonmystical people. Their thought is always turned in, rarely toward the specific job to be done.

Perhaps I set an impossible task

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## *the industrial safety panel*



# Production Bonuses from Safety

### THE QUESTION:

*What is the outstanding example, in your experience, of gains in production efficiency and economy that were the direct result of changes caused by the safety department?*

### THE PARTICIPANTS:

R. H. ALBISSE, safety director, Merck & Co., Rahway, N. J.

C. M. ALLEN, staff supervisor of safety, Armco Steel Corp., Middletown, Ohio.

W. F. BROWN, safety director, Consolidated Edison Company of New York, New York.

R. H. FERGUSON, manager of safety, Republic Steel Corp., Cleveland, Ohio.

GERARD O. GRIFFIN, director of safety, Dravo Corp., Pittsburgh, Pa.

GEORGE F. NUERNBERGER, safety engineer, A. B. Dick Company, Chicago.

### SUMMARY:

**A**T LAST, the Industrial Safety Panel discusses a question that is not controversial. Everybody agrees that safety not only does its primary job of safeguarding life and limb, but it also saves money and promotes efficiency.

Even those members of the panel who had to send regrets because of vacations, lack of time, pressure of other business or other reasons expressed their approval of the discussion and mentioned the "countless case histories" to prove the point if time permitted a proper review and preparation.

THE INDUSTRIAL SAFETY PANEL is an informed group of safety workers representing various branches of industry. Each month part of the Panel membership answers questions relating to accident prevention principles and methods.

The purpose of the Panel is primarily to obtain the personal views of the members. Statements presented here may or may not be expressions of company policy.

The Panel is conducted by mail and participants have no opportunity to compare notes or sharpen and define points of disagreement.

Cases cited in the replies cover many types of industrial operation, including ticklish chemical processes, steel rolling, hoisting slings, ladders, driver training, fire fighting, scaffolding, machine maintenance, natural gas transmission, power presses and house-keeping.

Each of the following cases is a story in itself.

MR. ALBISSE:



The chemical industry, because of the nature of its operations, must pay greater attention to safety than most industries. It has to contend with practically all hazards common to industrial operations, plus those associated

with the handling and processing of flammable, corrosive, and toxic materials.

Unless safety is built into a potentially dangerous chemical process, it is unlikely that it can continue as an economically sound manufacturing operation. Perhaps, for this reason, there are fewer outstanding examples of process revisions for safety which have resulted in more efficient operations.

There are instances, however, where the development of new safety techniques has made possible the use of more suitable raw materials which previously had been considered too dangerous for manufacturing purposes.

An outstanding recent example where the development of a safe method for handling a highly reactive compound paid real dividends involved a special remote control operation.

There is nothing new about running chemical reactions by remote control. In this case, however, the material was so highly reactive that equipment had to be designed to open the container, remove the product, and decontaminate the container without being touched by human hands. It was not an easy task, but it resulted in an annual savings of \$70,000, with an equipment in-

vestment of but \$20,000.

In this case, Research knew the yields would be appreciably higher if the highly reactive material could be employed. However, all concerned agreed that it could not be processed safely in conventional equipment. The problem was then assigned to safety and design engineers who successfully worked out the details.

The process has operated safely for more than two years and with greater efficiency than was originally expected.

Aside from providing additional proof that safety and efficiency go hand in hand, the new process is another example which indicates that even extremely dangerous materials can be handled safely, providing safe methods are developed and adequate facilities are made available.

MR. ALLEN:



Reviewing the highlights of more than 23 years in accident prevention work, I find that in every instance in which a plant or

a department made an outstanding safety record, the production and efficiency of the operation were at their highest level. A sudden upward trend in accidents in a department or a plant was generally accompanied by a downward trend in production and efficiency. I recall a few instances that will serve as simple illustrations:

Many years ago we operated several machines commonly called roller levelers. Sheets were fed by hand, and the sheets not being flat, were hard to get started into the rolls. The feeder and helper, in trying to feed them into the rolls occasionally got a hand caught.

After several serious hand injuries with ease because the guard installed at the head of the first set of rolls. Results were astonishing. The men could feed the machine with ease because the guard guided the sheets into the rolls.

Naturally the accidents stopped and production increased, all of which spelled lowered cost.

In checking the minor injury reports of a crane crew, whose duties required them to hook up packs of sheets with cable slings, I noticed the men were continually subjected to puncture wounds because of frayed slings, also sling replacement was high. We experimented with a non-kinking chain sling and the men liked the chain because it was easier to handle. The pay off on this safety suggestion was an immediate reduction in minor injuries and a savings of \$300 per month on slings. This idea was also adopted by other departments and plants.

Experience has taught us that it would be impossible to operate at high production peaks were it not for mechanical safety devices and personal protective equipment.

MR. BROWN:



Here are a few examples of safety ideas which, in addition to protecting our employees and the public, have increased efficiency and economy of operations:

In the past we have ordered ladders which "meet the requirements of the ASA Safety Code." Many ladders, while technically meeting the requirements of the code, did not meet the high safety standards we have set, and hence had to go to the shop for alteration before being placed in service. Included in this category were loose rungs, poor workmanship, defects in the wood not covered by the code, etc.

Ladders are now purchased according to our safety specifications. Although they cost slightly more, there is no cost of trucking to and from the shop, carpenter work at the shop and re-inspection, and the useful life of the ladder is extended.

A drivers' school was organized to give annual instruction and

testing of all drivers. In addition to the reduction in accidents, it was found that the drivers now understand better the operation of the clutch, brakes, tires etc., and they take much better care of their vehicles. This is reflected by a reduction in maintenance costs.

At the company fire school it was found the 20-lb dry chemical fire extinguisher could handle a fire almost as big as could the 40-gallon foam extinguisher. Hence, the replacements were made. This meant less maintenance cost, as well as more protection. It was discovered also that discarded foam extinguishers could be converted into heavy duty dry chemical extinguishers for one-fourth the cost of a new model.

There are other instances where safety devices reflected a reduction in operating costs, such as the circular scaffold for painting the large stacks in two days, where a week was previously the allotted time. In many instances the idea was developed through the cooperation of the safety bureau and the department concerned.

MR. FERGUSON:



Recently, in one of our steel districts during the course of a departmental safety meeting, a lively discussion took place concerning

a Republic Steel Corporation General Safety Order relating to the use of safety locks. A machine shop foreman protested that literal enforcement of the safety order was not practical in an operation which necessitated lubrication of saw machines, lathes and drill presses twice in an eight-hour turn. About twenty men were involved.

The order reads, in part:

Safety locks shall be furnished employees required to work on machinery, cranes, tables, etc., for the purpose of making repairs, adjustments, or doing any other work where there is dan-

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# Tree Trimming

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1. Branches and limbs of trees growing near or in contact with overhead lines are a potential source of trouble and of service interruption. Broken branches and limbs may fall across lines and break wires, they may act as conductors between wires, or they may force wires together and cause short circuits or burndowns.

2. To prevent these conditions, a regular tree trimming program is necessary. It may include trimming trees before they reach the wires to assure safe clearances, removal of broken or dead limbs,

This Data Sheet is one of a series published by National Safety Council. It is a compilation of experience from many sources. It should not be assumed that it includes every acceptable procedure in its field. It must not be confused with American Standard Safety codes; federal laws; insurance requirements; state laws, rules and regulations, and municipal ordinances. Reprints of Data Sheets are available from the National Safety Council.

removal of rotted or dead trunks, and sometimes felling an entire tree.

## Types of Trimming Operations

3. In *spot trimming*, a lineman or trouble man is called upon to handle a specific emergency problem involving wires or a public hazard. He has a limited amount of tree-trimming equipment—a pole pruner, saw, and such standard linemen's equipment as a tool belt and safety strap, ladder, and several hand lines.

4. Each company has its own policy with regard to the number of men needed to help a lineman in spot trimming. Some companies provide a helper and a working chauffeur; others require that broken limbs be tied up and a full time crew be called to do the job safely. For unusual condi-

tions the radio equipment in the trouble truck may be used to summon immediate help of other line crews.

5. *Seasonal trimming.* Municipalities, small utilities, and transportation companies having electric trolley buses and street cars make up seasonal crews for tree trimming jobs, using men from various departments and an experienced foreman. Their equipment usually consists of open body trucks, pruning poles and



Figure 1. A good tree trimmer's saddle belt made of nylon-reinforced fabric with climbing rope tied into a steel harness snap and fixture snapped into rings of belt. Wires have been de-energized. (Courtesy Asplundh Tree Expert Company)



Figure 2. A telescoping ladder used to reach main supporting limbs so that workers can climb into tree area. A standing platform, not shown in the photograph, can be attached to the extended ladder for spot trimming.

saws, extension ladders, and hand lines.

6. *Regular trimming.* A scheduled tree trimming program needs a regular crew assigned only to tree work. This full time work requires specialized training in tree trimming problems, with the crew fully equipped and supervised by a competent man.

7. For safe operation, and where heavy trimming and topping are necessary, a recommended full-time crew would comprise a minimum of four men, two climbers, and a combination truck driver and brushman, all under the supervision of a competent man. Some companies add a lineman where they expect electrical problems.

8. Although tree-trimming operations present many common hazards such as cuts and bruises, from limbs, brush, handsaws, and machinery, the principal ones are the following:

- a. Falls from trees
- b. Contact with energized wires
- c. Falling trees and falling limbs
- d. Improper climbing and working methods

9. This data sheet is concerned with the prevention of accidents in tree-trimming operations by means of proper supervision, use



Figure 4. All men should be taught tree top and prone pressure methods of resuscitation and have frequent practice in them. (Courtesy Asplundh Tree Expert Co.)

of good equipment, and adherence to safe practices and procedures.

#### Supervision

10. The lineman who does spot trimming, the temporary foreman of a seasonal trimming crew, and the foreman of a regular tree trimming crew must all have a knowledge of the operations and skills needed to perform the job safely. They should be firm be-

lievers in safe practices and procedures, and foremen should see that their men follow such practices.

11. The lineman who does spot trimming should have a helper who is experienced, who is a clear thinker, and who can work as a member of a team in an emergency or under adverse conditions.

12. If the foreman of a seasonal crew has the opportunity to select his own men, he should evaluate their skills and match the man to the job so far as possible. When records or applications are made available, he should take into account the medical and work history of each man and discuss with him any questionable items.

13. It is recommended that the younger men climb ladders, climb in trees, or reach in pruning operations. Older men should be assigned to ground work such as clearing away trimmings, loading trucks, coiling ropes, handling tools, and protecting the public from work areas.

14. Each foreman should have a competent man who can take his place should it be necessary for



Figure 3. Note use of hard hats and heavy duty high-top shoes. Working area is free of brush accumulations, and good footing can be secured by workers. (Courtesy Asplundh Tree Expert Company)



him to leave the crew. A crew should at no time be left without a man in charge.

15. Job briefing should be given before each operation so that the men will fully understand the duties to be performed and the hazards involved. At this time, the tools, equipment, and protective devices to be used should be inspected. Defective or worn tools should be tagged, with defects noted on the tags, and returned to the shop or tool room for replacement.

16. The foreman should be consulted and encouraged to make recommendations when tools and equipment are being considered for purchase. A change in type of tool or material may enable the crew to work more efficiently and more safely.

#### Equipment

17. Types of equipment will vary from one company to another, but for the safety of the men, the following items should be standard.

18. *Safety belts.* Either a line-man's body belt and safety strap or a tree trimming saddle should

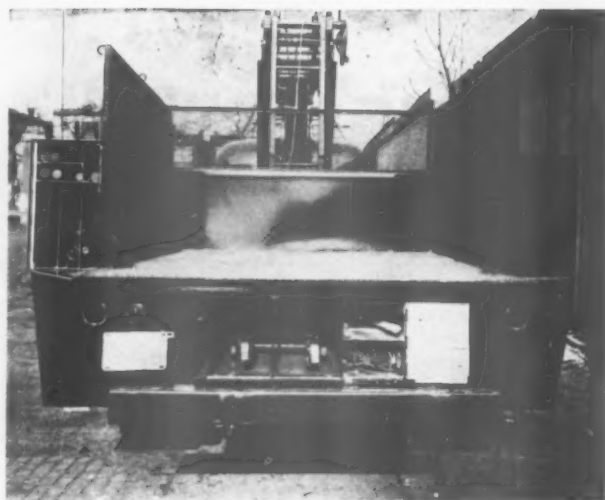


Figure 6. Modern tree trimming truck with separate storage compartments for rope, ladders, and sharp tools. Entire body is left free for brush and limbs.

be used. This equipment has D rings to which the snaps of the life line can be fastened.

19. A good tree trimmer's saddle belt made of nylon-reinforced fabric is superior to a leather belt. The tensile strength is greater, the belt is lighter in weight, and the material is treated to resist mildew and rot. (See Figure 1.)

20. *Rope.* Each climber should have at least one life line and one hand line. The lines should be 1/2 inch pure manila hemp or 1/2 inch mountain nylon rope, free of splices. Minimum length should be 100 feet, but a line about 125 feet or more is recommended because its double length will reach the ground under average conditions.

21. At least two 3/4 inch bull lines, each 250 feet long, should be provided for each crew.

22. Because storage conditions on tree trucks are usually poor, it is recommended that ropes be treated to withstand moisture and rotting. (See paragraphs 51 and 52.)

23. *Pole pruners.* Pruners should have handles made of a

good grade of wood, free of knots and splinters. They should be treated to prevent absorption of moisture. It is recommended that leather guards be provided to cover the cutting heads when the pruners are not in use.

24. The type of pruner which has a wire or chain connecting the cutter head to the lever handle near the lower end of the pole must not be used in line clearing work. For electrical safety, it is recommended that an operating rope (moisture treated) be used, attached to the cutting head and run through a guide in the end of the handle so that the rope is always where the hand can reach it. The head of the pruner should be so constructed that it can be locked in the closed position.

25. Compounding handles located midway along the handle are not recommended because they tend to catch in limbs and branches.

26. *Ladders.\** Metal ladders should not be used because of

\* See National Safety Council Safe Practices Pamphlet No. 1, *Ladders*.

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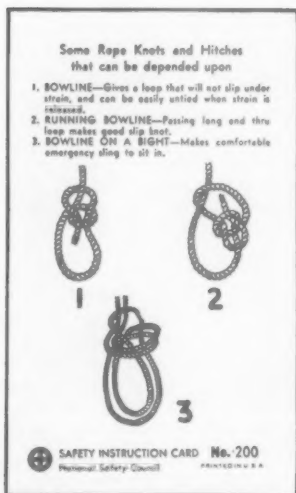


Figure 5. NSC Safety Instruction Card No. 200.



# Cause AND CURE

These examples, taken from actual cases, are presented for the use of people responsible for safety. It is believed that these, or similar cases experienced in the reader's own plant, can serve as a basis for safety discussion.

## Engrossed in His Work



An electrician and helper were installing electrical equipment, including two oil circuit breakers. On the first oil circuit breaker installation, the electrician found it necessary to climb to the top of the circuit breaker to measure and install electrical fittings for connection of the circuit breaker to a 69,000 volt bus. When the work was completed, it was released from construction status and turned over for operation. Immediately, it was energized with 69,000 volts.

The electrician and helper then began work on the second circuit breaker which was to be very similar to the first. As the men were bending and shaping the bus, they would occasionally walk over to the energized circuit breaker to view previously installed fittings and equipment. During the work, the electrician apparently climbed (not observed by his helper) on the energized circuit breaker to measure one of the fittings when he received a fatal shock.

There had been no need for this action as a full set of bus measurements in addition to templates had been provided.

**Correction:** Where any hazard exists, suitable barriers and signs must be erected to identify these hazards. Unsafe areas should be positively identified. Suitable barriers will preclude contact with energized equipment. Such barriers will not only serve mechanically to prevent people from getting into a hazardous situation, but will also act as a reminder to employees deeply engrossed in their work that a certain hazard does exist.

## Simple Accidents



The first hand tool was probably a crude hammer made of a stone secured to a branch of a tree by leather thongs. The hand tool industry has come a long way from that time with a list of tools that run into the thousands—one for every job. Accidents like the following still happen by the thousands in industry:

1. A workman was cutting weeds with a butcher knife and as he swung at some vines the knife bounced off and struck his leg.

2. A worker was holding 60-penny spikes with his hand and starting them with his four-pound maul; he missed the nail and crushed his thumb.

3. A workman preparing to work on a valve found a 1 x 6 nailed to two 2 x 4 uprights to be in his way; he took hold of the two uprights to brace himself and attempted to kick out the 1 x 6; when it came loose it swung back and one of the nails struck him.

**Correction:** Of course, the first worker should have been supplied with a scythe; the second man should have been supplied with a regular carpenter hammer to start the spikes; No. 3 should have used a hammer instead of his foot to remove the obstruction.

These "simple" accidents are the hardest to control. Education and supervision seem to be the answer. Would it be too much to say that the number of accidents of this type which occur are a pretty good measure of the effectiveness of employee safety training?



## The Old Maestro

(Fiction)

By BILL ANDREWS

September 4, 1951

THE SMALL, TRIM HOUSE TRAILER pulled into my driveway Sunday afternoon. The license plates were from Florida, but there was a Glacier National Park sticker on the windshield.

While Sue and I were speculating on which of our friends it might be, a spry little old man popped out of the car's seat. I didn't recognize him in his grey slacks, sport shirt, dark glasses. But when he cut across the lawn to our front steps I knew the walk—the tight, fast steps that had led me up and down a hundred miles of factory aisles in five years.

It was Lou Hill—the boss—my

first boss when I was a green kid just starting out as a junior safety engineer at Monarch. Lou Hill, the guy who taught me most of what I know, the goad and guide and father confessor of my apprenticeship.

I haven't worked with Lou since '41. I hadn't seen him since '46 when he announced his retirement at the National Safety Congress. So, almost literally, I fell on his neck and hugged him.

After I had introduced him to Sue and the youngster, after suitable libations and a hastily expanded dinner, the boss and I adjourned to the backyard for conversation.

Lou explained his present way

of life. "I'm a vagabond," he said. "Mary died before I retired, so I haven't a thing to tie me down. Winters, I spend in St. Petersburg playing checkers. Summers I get into the jalopy and go bumming. I've been northwest this year, and I've got a date deer hunting in Michigan this fall before I go South.

"But the last two years, I've been conducting some serious business along the way. I've been checking up on my boys. There are a dozen of 'em scattered from coast to coast—boys like you that I broke into the safety field at Monarch. Eddie, Bill, Jack—but you wouldn't know them, probably. A queer bunch—some of them almost as crazy as I am, which is probably why I hired them."

I grinned, but he scowled at me. "Not you, darn you. You're so sane, so darned sane, I can't imagine why I hired you. You didn't have a thing to recommend you except a little brains and some ability. You must have caught me on an off day."

I let that go without worrying about whether he was insulting or complimenting me. But I asked, "How do you find your boys are doing?"

He shook his head. "Not too well. I must have been a bad boss. More than half of them have left safety work. I chased one guy clear up the back roads to a mining camp in Utah—three-quarters of the way up a black, ugly mountain it was—and I find the guy's nothing but a darned superintendent, letting some other guy do his safety job for him. And Ed's sales manager for an oil well supply house, making money and growing ulcers. It's too bad."

"On that grounds," I said, "I ought to be one of your successes. I'm not making money, not growing ulcers, and am working as a safety engineer."

He nodded, solemnly. "I hope you're one of my successes. But that's what I've come to find out. Tell me what you're doing and how you're doing it."

I want, before I go on with my story, to make one thing clear. I love my wife dearly. I consider her intelligent as well as beautiful. But she is a gross misrepresenter of the truth when she claims that my response to the old maestro's request for information was an unbroken speech of 10 hours' duration.

I can prove my wife a liar by two facts—I distinctly remember that she interrupted our conversation with supper, and, in any case, nobody in the history of the world ever talked to my old boss for ten consecutive minutes without being interrupted frequently by questions, snorts, comments and criticism.

Actually, what happened was that for ten hours I was subjected to a violent cross examination. I would explain a point, and the boss would jump on me with both feet. I would defend my position and he would rebut my explanation. Then I would, if I could, rebut the rebuttal, and we would go on to a new point.

On Labor Day I took him to the plant, and we went over the physical setup. I'm 30 years younger than Lou Hill and four inches taller, but he can still walk the legs off me. We tramped that empty plant as I have never tramped it on any one day.

Finally, he spent this morning with me, meeting my staff, watching operations, listening to a foremen's safety meeting.

We had lunch with Larson, who is both the vice-president for manufacturing and my immediate superior. I wish I had a wire recording of Lou's statement. It was, on the surface, a sharp analysis of my work, but actually, it was a most exaggerated statement of my effectiveness, with just enough of criticism to make it sound believable.

Nobody can beat the old man when he really wants to lay on the praise with a thick brush. I remember one department manager at Monarch with a frequency of 36.0, an ignorant, stubborn,

—To page 91

## New AT&T Head is NSC Trustee



CLEO F. CRAIG, who became president of the American Telephone & Telegraph Company July 2, has been prominent in the administration of National Safety Council affairs since 1944 when he was elected to the Council's Board of Directors. He was chairman of the Board, 1947-48, and was elected a Trustee this year.

His long-standing interest in accident prevention, originating in his concern for safety in telephone operation, extended to the development of safety measures on a nationwide scale.

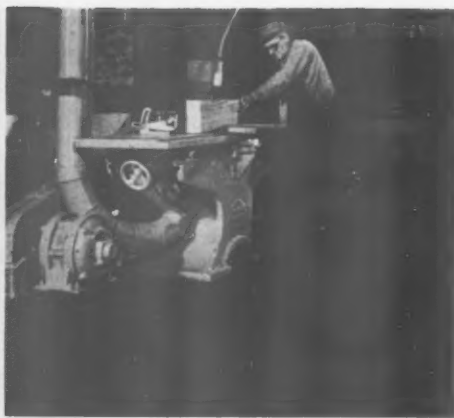
Born in Rich Hill, Mo., April 6, 1893, Mr. Craig graduated from high school at 16 with top honors in his class. At the University of Missouri where he studied engineering, he won distinction in basketball as well as in his studies.

Starting as a \$15 a week equipment man in the St. Louis office of AT&T's Long Lines department in 1915, Mr. Craig has occupied responsible positions in many branches of the Bell System's nation-wide operations.

In 1933 he became general manager of Long Lines and seven years later was elected vice-president of that division. His next change was election as vice-president in charge of the Personnel Relations Department. In 1948 he was named to head the Operations and Engineering Department. A year later he was elected vice-president in charge of finance and revenue requirements.



**BEFORE RESURFACING.** Area of old concrete to be covered was wiped clean of dirt and grease, then roughened by light sandblasting. Around this area a groove of 6 inches wide and 1/8 inch deep was cut. Groove permits edge of new surface to be brought down flush with old floor.



**THIRTY MONTHS LATER.** Floor is still in good condition after 2½ years of hard use. Corner of resurfaced area is visible in foreground. A special cement containing about 10 per cent neoprene was used. The surface has proved comfortable under foot for the machine operator and resistant to slipping.

## The Floor Takes the Punishment — Not the Feet

**C**ONCRETE is undoubtedly the most useful and widely used flooring material. It has structural strength, durability, ease of cleaning, fire resistance, and moderate relative cost. While an excellent base for many types of surfacing, it is not always satisfactory under foot. It is unyielding and tiring to the feet, sometimes cold, and under certain conditions slippery.

In November 1948 the wood-working shop of a DuPont plant undertook an experiment in floor surfacing to end workers' complaints that the floors were slippery and hard on the feet.

A special water-setting cement was mixed with specially compounded neoprene latex and troweled one-quarter inch thick over the old concrete floor around three of the machines. One of them, a jointer, is shown in the accompanying illustrations.

After 2½ years of rough serv-

ice, the plant management reports highly satisfactory results from the new surfacing.

Non-skid qualities of the resurfaced floor are noticeably better. Improvement over bare concrete is especially pronounced where oil or water has been spilled. Workers questioned on the point report that they definitely are safer on the rubberized cement flooring; they don't have to "think twice."

The workers are unanimous in saying that the new floors are easier on the feet. One machine operator says he used to have to soak his feet every night; now he doesn't.

The shop foreman, a skeptic at first, recalls that at the time of the installation he didn't see how such a thin coating was going to have enough "give" to it to do any good. He admits now that it must be more comfortable; the men all like it.

The material has stood up well

under heavy traffic. It has not yet worn through, nor has it chipped or cracked. It has not come loose from the subfloor.

Although a considerable amount of oil has dripped from the machines onto the floor, there have been no signs of deterioration. The need for oil resistance was one reason for using neoprene as the elastomer in the resurfacing compound.

Similar floors are reported to have found application in many other industrial settings where safety is a prime consideration. Examples are roof decks, platforms of railroad passenger cars, weather decks on ships, work floors in textile mills and machine shops, kitchens, laundry rooms, and behind lunch counters.

It is also used for conductive floors for dissipation of static electricity in such locations as munitions plants and hospital operating rooms.



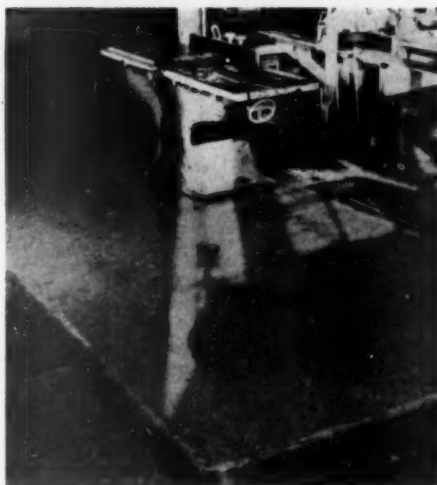
**INGREDIENTS ARE MIXED** as specified by the manufacturer. Formulation has three parts: Specially compounded latex (water suspension) of neoprene; watersetting cement powders; aggregate, consisting in this case of quartz sand. System is roughly analogous to ordinary concrete, with latex substituted for water and special cement in place of Portland cement.

Some of these installations bring out qualities not particularly vital in the woodworking shop. For certain operations the mix can be modified to meet local requirements. For example, cork can be added for extra resilience and quietness. Floors can be made in colored and decorative forms. In one art museum it made an attractive terrazzo.

Accompanying illustrations show details of installation in the woodworking shop.



**APPLYING NEW SURFACE.** Man with brush is applying pre-coat of latex to insure good bond. Flooring compound is troweled on about  $\frac{1}{4}$  inch thick and spread evenly to smooth out bumps and cracks in old floor. Material can be applied over wood block, steel plate or concrete with equally satisfactory results.



**FINISHED FLOOR**—applied Friday, in service Monday. It is smooth, easily cleaned, resistant to oil and grease, and can be produced in several colors. Color is helpful in defining the island of work space belonging to a particular machine. It helps to keep passers-by from walking too close and piling materials in work area.



**RESISTANCE TO CHIPPING** was demonstrated by accident. Clean-up man had a habit of dropping steel waste can on its edge. It made these dents but did not chip or crack the floor. The "give" that made it possible to dent the floor makes it easier on feet.



# Industrial Health

Abstracts of current literature on Industrial  
Hygiene, Medicine, and Nursing

By F. A. VAN ATTA, Industrial Department, NSC

## The Alcoholic Personality

*The Psychological Evaluation of Alcoholics*, by Morse P. Manson. *Industrial Medicine and Surgery* 20:281-283 (June, 1951).

There are a number of superstitions with regard to alcoholics as a group such as that they are generally unusually gifted intellectually or that they are usually stupid. It is also widely believed that alcoholics in general are somewhat more fluent verbally than the average of the population.

Actual tests have indicated that the alcoholics studied actually were somewhat more gifted intellectually than the average intelligence of the general population. This probably indicates only that these alcoholics were a selected group since they were the ones who had come to a hospital or sanitarium for treatment of their alcoholism. The male alcoholics were also found to have a slightly larger vocabulary than the non-alcoholic males and the female alcoholics had smaller vocabularies than non-alcoholic women in general. The differences in size of vocabulary were not very significant in either case.

Actual differences which can be measured are that the alcoholics as a group have completed approximately three years less in school. The alcoholics generally have excessive numbers of anxieties and fears and tend to easily shift into depressed states. They are also generally highly emotional and readily develop feelings of deep resentment toward their surroundings.

They generally have had a series of failures in projects which they have started and lack the ability to carry through to com-

pletion most of the activities which well-adjusted persons achieve.

The alcoholics seem to feel that they are alone in the world and they do develop no strong ties with their families.

In view of these recognizable personality differences between the alcoholics and the general population, it should be possible to devise a test which will identify the alcoholic personality. Such a test should serve a number of purposes both in the saving of time in personnel management and in clinical evaluation of the alcoholic personality and they would also have a considerable utility in providing a factual, objective bit of evidence to the alcoholic that he actually did have an alcoholic personality.

At least three tests have been made up for the identification of alcoholics. Of these the Manson Evaluation has a reliability coefficient of correlation of 0.94 and the "Alcadd Test" has a coefficient of correlation of 0.92 for reliability for males and of 0.96 for females.

Either of these tests can be completed in from 10 to 15 minutes and scored in about 5 minutes. They are both pencil and paper tests and require concentrated attention from the examiner only in the scoring.

The Manson test evaluates seven traits frequently noted in alcoholics and relatively seldom in non-alcoholics. These are the seven traits mentioned above. The Alcadd test is strictly an alcoholic diction test and evaluates five traits of alcoholic behavior specifically. These are regularity of drinking, preference for drinking over other activities, lack of con-

trolled drinking, rationalization of drinking, and excessive emotionality.

## The Aged in Industry

*Geriatrics—Problems with the Aged in Industry*, by Carl T. Olson. *Industrial Medicine and Surgery* 20:203-211 (May, 1951).

The study of geriatrics has two phases which are essentially medical and one which is essentially social. The biology of senescence is the study of the series of processes which involve aging in living organisms. This involves the study of the mechanisms, as yet unknown, which slow down and stop normal growth as maturity is reached and also the mechanisms which produce the high incidence of new growths in the form of various tumors in the elderly.

The application to general society of the biology of senescence is geriatric medicine as a clinical specialty. Geriatric medicine properly understood is concerned not only with the cure of disease and the alleviation of suffering but with the maintenance of the effectiveness of the individual throughout his life. This should be equally true whether it is geriatric medicine as applied to industry or geriatric medicine in private practice.

Finally there is the social or sociological study of the effects on society in general of the changing population pattern due to the aging of the whole population. The average life expectancy at birth has increased by 20 years in the past 50 years. As one result, more than a third of the labor force in the United States is now 45 years old or older as compared with less than one-fourth in 1890.

There is a great tendency in industry at the present time to introduce fixed compulsory retirement ages and to set up pension plans for the retired individuals. This is certainly an improvement over no provision at all but it is very far from a complete or proper answer to the problem of the aged population.

One of the fundamental difficul-

—To page 72



## Reasons Why THE Finnell DRY SCRUBBER CLEANS FASTER... More Thoroughly

A unique combination of labor-saving features is responsible for the greater speed and thoroughness with which the Finnell Dry Scrubber cleans grease-caked floors.

Equipped with two powerful scarifying brushes, this Finnell digs through and quickly loosens the most stubborn coatings of dirt, oil, grease, and shavings—as the special couplings adjust brushes to floor irregularities, to get into indentations and grooves that rigid coupling brushes would pass over and miss.

To re-sharpen the brushes of the Finnell Dry Scrubber, simply flip the switch. That reverses the motion of the brushes and re-sharpens them automatically... while working. Eliminates the need for frequent changing of brushes by hand in order to maintain a good cutting edge.

Low construction makes it easy to clean around and beneath equipment, and the adjustable handle adapts the machine to operator's height for most effective working position.

Various types and sizes of wire scarifying brushes are interchangeable in the brush rings of this Finnell and, with other brush rings, the machine can be used for wet scrubbing, steel-wooling, waxing, and polishing. Ruggedly constructed. Has heavy duty G. E. Motor, oversize Timken Roller Bearings, special bronze worm gears, leak-proof gear case.

For consultation, demonstration, or literature, phone or write nearest Finnell Branch or Finnell System, Inc., 2209 East St., Elkhart, Ind. Branch Offices in all principal cities of the United States and Canada.



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BRANCHES  
IN ALL  
PRINCIPAL  
CITIES

## For Distinguished Service

Recent presentations of the National Safety Council's  
Award of Honor for Distinguished Service to Safety

### Ford Motor Co.

*Louisville, Ky., Assembly Plant*

—For operating 3,180,519 man-hours between January 1 and December 31, 1950. The award was presented before a recent mass meeting of employees by Edward J. Buhner, chairman of the board of Silver Express Fleet, Louisville, and a member of the National Safety Council's Board of Directors. This is a second award to the Louisville plant.

### Tinker Air Force Base

*Near Oklahoma City, Okla.*

Award based on over-all improvement in ground safety record for 1950 as compared to 1948-49 average:

66½ per cent decrease in property damage cost.

48.5 per cent decrease in per capita cost covering all accidents, including personal injuries, military and civilian, and property and vehicle damage.

13.19 per cent decrease in civilian injury rate although there was an increase of 3,129,332 man hours of exposure in 1950.

12.27 per cent decrease in vehicle accident rate although the total number of miles driven by government motor vehicles in 1950 was 3,029,525 miles, an increase of 525,948 miles over the 1948-49 average.

To aid in accomplishing this record, Tinker's ground safety section did this during 1950:

Conducted safety orientation of one hour to 5,812 new employees.

Training 480 safety supervisors in the eight-hour course, "Safety in Supervision."

Showed safety films to approximately 5,690 personnel. The films averaged a half-hour each in length. In addition, training aids on special subjects, designed by experts and made available by national safety organizations, were used in classrooms.

150 persons were trained in two-hour courses covering special hazardous occupations or materials.

Ground safety representatives conducted safety orientation lectures to 4,800 military personnel.

The award was presented by Maj. Gen. St. Clair Street, deputy commanding general of the Air Materiel Command, to Maj. Gen. F. S. Borum, commanding general of Tinker, on June 26 before an audience of several thousand employees.

### U. S. Army, Alaska

The National Safety Council's Award of Honor for Distinguished Service to safety for 1950 was awarded to the United States Army, Alaska. To mark the occasion an inscribed plaque was presented by Donald S. Buck, Assistant United States Army Safety Director with the Department of Army, Washington, D. C.

The plaque was accepted by Major General Julian W. Cunningham,

ham, Commanding General. Lieutenant General William E. Kepner, Commander-in-Chief, Alaska Command, was present at the ceremony to extend congratulations to General Cunningham and members of his Command. Among officials of the Command present was H. A. Gaasland, safety director for USARAL, who guided the 1950 program which merited the award.

Mr. Buck presented the plaque with best wishes to the personnel of the Alaska forces and praised their record of safety improvement. The award was given for a marked reduction of accident rates in all phases of accident prevention over the previous two years.

This is the second time in four years that United States Army, Alaska, has received the Award of Honor for Distinguished Service to Safety. The first award was received in 1947.

### New Rules on Plane Evacuation

Rules governing the maximum number of passengers allowed in any new type transport have been tightened by the Safety Office of the Civil Aeronautics Administration. The new yardstick is the number of passengers that could get out of the plane in 1½ minutes.

The old emergency evacuation standard was one second per passenger, with the plane lying flat on the ground instead of standing high on its wheels. Under the old rule there was no maximum limit for getting all the passengers out.

The new rule keeps the one second per passenger standard but sets a top limit of 90 seconds for getting all passengers out. The new wheels-down evacuation test means passengers must let themselves out by the ladders and other emergency equipment instead of just hopping out through the exits.

The new rule will not change the maximum loads permitted on old-type planes already certificated unless a carrier wants to raise the previous limits. It will govern the ultimate seating density on new type planes.



On its way to the flagpole at the Ford Louisville plant is the Green Cross banner indicating that the plant has won the NSC Award of Honor for Distinguished Service to Safety. Star indicates a second award.

# Thom McAn RUGGED FAVORITES FOR EXTRA RUGGED JOBS

Here are the styles that have been the leaders for years with men who need the maximum wearability in safety shoe protection. And because they're Thom McAns, men wear them *willingly*.

They know and respect the name Thom McAn... for good looks, all-day foot comfort, more mileage for the money. They naturally turn to Thom McAn for extra on-the-job foot protection, too.

Make Thom McAns available to *your* men and help keep safety records *safe*!

5-4006—Rugged brown elk leather work blucher. One piece seamless back with "neo-cork" sole and heel.

5-1012—Husky black work blucher. One piece seamless back. Oil resisting sole and heel.

5-4130—Lace to the toe, brown elk leather work blucher. New "Winguard 400" steel safety toe box with oil resisting sole and heel.

5-1010—Sturdy black work blucher. Heavy leather sole. Rubber heel.

## SOLD 2 WAYS

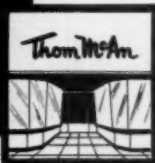
1. Stocked for your men in Thom McAn stores.
2. Sold direct to plants.

Details of this service, plus information on the 4-way employee purchase plan, and the Thom McAn safety shoe features, should all be on your desk. Just write us and we'll see that they get there.

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Thom McAn  
SAFETY SHOES

A DIVISION OF MELVILLE SHOE CORPORATION



# THE ACCIDENT BAROMETER

Prepared by the Statistical Division, National Safety Council

Accidental deaths in May numbered approximately 8,000, or 5 per cent more than in May last year. Most of the increase occurred in deaths from public non-motor-vehicle accidents, but deaths from motor-vehicle and occupational accidents also were more numerous. Home accident fatalities totalled about the same as in May, 1950.

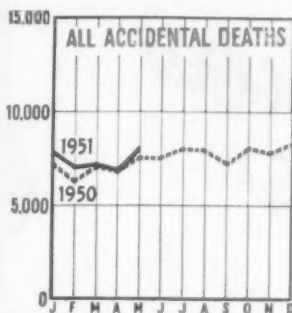
The total for five months was 37,000, or 6 per cent more than last year. All classes showed some increase, with the largest increase recorded in motor-vehicle deaths and the smallest in home accident fatalities.

## Motor-Vehicle Deaths

The May total of motor-vehicle deaths was 2,780, an increase of 3 per cent from May last year. Compared to 1949, it was an increase of 14 per cent.

Deaths for the five months totalled 13,240, an increase of 6 per cent from 12,510 in 1950. The death rate per 100,000,000 vehicle miles was 6.7, a 3 per cent reduction from the 1950 five-month rate of 6.9.

Of the 42 states reporting for five months, 14 reported fewer deaths than in 1950 and 28 had more deaths. Reporting cities with populations over 10,000 had an increase of 2 per cent for May and 4 per cent for the first five months of 1951.



	1951	1950	Change
May	8,000	7,600	+5%
Five Months	37,000	35,000	+6%

Regional changes from 1950 in the five-month death totals were:

North Atlantic	+ 6%
South Atlantic	+ 1%
North Central	+ 3%
South Central	- 6%
Mountain	+ 8%
Pacific	+30%

## Occupational Accidents

Deaths from occupational accidents numbered approximately 1,500 in May, or 100 more than last year. The total for the five months was 6,800, an increase of 8 per cent over 6,300 in 1950.

The May frequency rate for plants in community council interplant contests was 8.47, a decrease of 1 per cent from last year. The May rate for plants in the National Safety Council's seven sectional contests was 6.63 an increase of

4 per cent over 1950. The five-month rate in the community council contests was 8.46—an increase of 7 per cent; while in sectional contests it was 6.78, a decrease of 1 per cent.

## Public Deaths

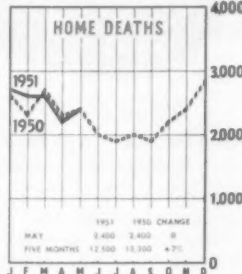
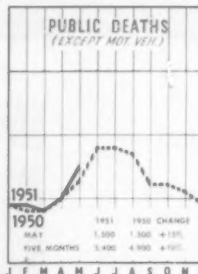
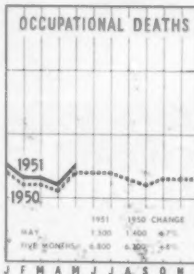
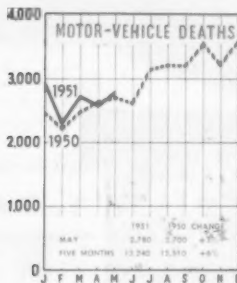
The death total for public non-motor-vehicle accidents in May was approximately 1,500, an increase of 200 deaths over last year.

Deaths during the five months numbered about 5,400, an increase of 10 per cent over 1950. There were moderate increases in deaths from firearms and transportation accidents and small increases in fatal falls and unclassified public accidents. Deaths from drownings showed a small reduction from last year. Increases were reported in all age groups with the largest change recorded for children under 5 years of age and the smallest change for persons 65 years and over.

## Home Deaths

May deaths from home accidents totalled 2,400, about the same number as occurred in May, 1950.

The five-month death total was 12,500, an increase of 2 per cent over last year. Increases in fatal burns, falls and firearms accidents were partially offset by decreases in fatal poisonings and mechanical suffocation deaths. Deaths of children under 15 years and persons 65 years and over were more numerous than last year. Small decreases were reported for young people 15 to 24 years and persons 45 to 64 years of age.





## MERCUCROCHROME\*

(H. W. & D. BRAND OF MERBROMIN, DIBROMOXYMERCURIFLUORESCIN-SODIUM)

Do not neglect wounds, however small; even scratches and small cuts may become infected if they are not promptly and properly treated.

'Mercurochrome' (H.W. & D. brand of merbromin, dibromoxymercurifluorescein-sodium) is one of the best antiseptics for first aid use. It is accepted by the Council on Pharmacy and Chemistry of the American Medical Association for this purpose.

The 2% aqueous solution is not irritating or toxic in wounds; minor injuries are reported more promptly when 'Mercurochrome' is the routine antiseptic, because treatment is not painful.

'Mercurochrome' solution keeps indefinitely; the color shows where it has been applied.

Physicians have used 'Mercurochrome' for more than 28 years.

Be sure to include 'Mercurochrome' in your first aid supplies.

\*Reg. U. S. Pat. Off.



**HYNSON, WESTCOTT & DUNNING, INC.**



BALTIMORE, MARYLAND



# The NSC and Civil Defense

A Statement adopted by the Board of Directors, National Safety Council, meeting in Chicago, July 10, 1951

**T**HE task of building a total national defense in the face of a critical international situation obviously includes developing a strong home front with every citizen trained and awake to the necessity of doing his part. The Federal Civil Defense Administration was established (Public Law 920, 81st Congress, 1950) to provide Federal leadership to the states and cities in organizing home defense.

The law leaves to the states and localities concerned the responsibility of operation for civil defense. The term "civil defense" is limited to preparation for enemy attack and to activities during and after such attacks. It is generally believed that such attacks would consist of large-scale bombing of industrial areas and centers of large population by air, submarine, or saboteurs.

The main job as of now is to capitalize on the supreme confidence the American people have in themselves. In the midst of doubt and confusion and lack of coordination, the American people need to be reminded that home defense and community defense are the foundations of national defense. It is believed that public support will rally around such a concept.

The Federal Civil Defense Administration has called upon the National Safety Council, among many other national organizations, to assist.

## How NSC Can Help

Analysis indicates certain bases for cooperation. These are:

1. Many persons in the safety movement are given specific responsibilities in local civil defense programs.
2. Certain specific aspects of the

local civil defense program are closely connected with standard accident prevention activities, for example, in industrial plant protection and home fire prevention.

3. It is the patriotic duty of organizations to assist in a national emergency.

It is the opinion of the Board of Directors of the National Safety Council that a major contribution in the total defense picture is now being made by the National Safety Council including its members, its affiliates, and staff.

This contribution is through intensified effort to reduce the losses of much needed manpower, equipment and materials, and to reduce the delays in vital production and transportation caused by industrial, highway, farm, home, and other accidents. In industry the job is being tackled as a part of disaster control. The Board also believes that the National Safety Council can assist in the civil defense program in several ways. Among these are:

1. Collection and dissemination of appropriate information on the civil defense program to our members through our magazines and newsletters.
2. Exploration and discussion of special safety methods and techniques applicable to civil defense in meetings of various National Safety Council Sections and Conferences as well as at such meetings as the annual Congress.
3. Information, advice, and assistance to our chapters and other local affiliates concerning appropriate activities helpful to local civil defense programs.
4. Public announcement to the Federal Civil Defense Administration that the National Safety Council will assist in every way possible.

## Recommendations

The Board of Directors believes that a strong national defense, which would include industrial production, military preparation,

and civil defense, is necessary for the preservation of peace and the preservation of the American way of life. With these points in mind the Board authorizes the staff to carry out the four-point program listed above.

In addition, the Board urges that National Safety Council members (including chapters, organizations, corporations, individuals, and all affiliated groups) as well as organized public support groups with which we work, explore to the maximum their ability to translate into action civil defense policies and programs on the local level.

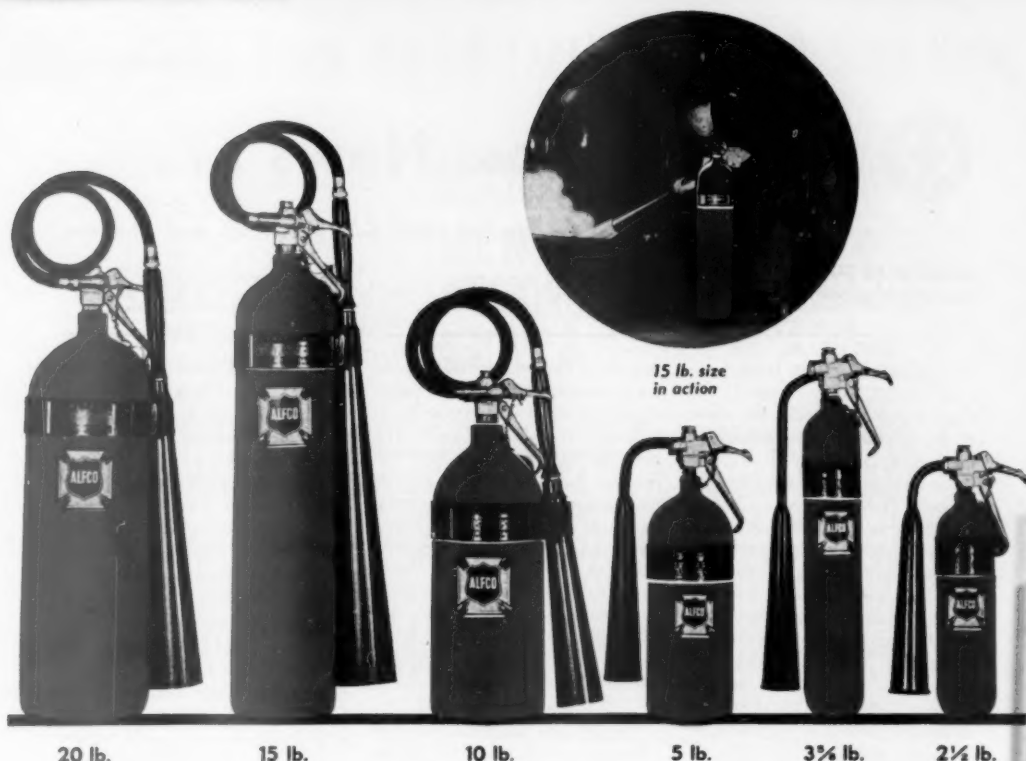
## Disaster Control

Civil Defense Work is taking the broader form of disaster control in most of the industrial organizations represented on the Council's Board of Directors and Industrial Conference. This was the consensus of both groups in recent discussions of civil defense activities and their relation to industrial safety programs.

Concern with all types of disaster potentials, not limited to enemy attack, has the valuable corollary of disaster prevention. A survey of what can happen often leads to preventive measures as well as relief plans.

*American Machinist* magazine's outstanding 32-page supplement, *Disaster Control*, was sent free of charge to industrial members a few months ago. Widespread interest was immediately apparent. Single copies of the reprint may be obtained from *American Machinist* or from the Council. Quantity prices will be quoted by either on request.





## ALFCO SPEEDEX FIRE EXTINGUISHERS

### *Spout Quick Death to Fire!*

**T**hey put out fires in a hurry! If required, the entire contents expanding to 450 times stored volume, can be discharged within 25 seconds. You'll like these handy, quick-acting Alfco Extinguishers, their ease of operation, their fast discharge of a lot or a little of carbon dioxide gas as needed.

You'll like having nothing to clean up. The

gas dissipates without a trace — and you'll like the convenience of size, the good looks too. They're really smart in appearance.

There is a capacity size model to meet your requirements from 20 lbs. down to 2½ lbs.

Wheeled Engines also available in 50, 75, and 100 lb. sizes.



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OUR 2nd CENTURY OF LEADERSHIP IN FIRE PROTECTION

Visit our Booths Nos. 116 and 117 at National Safety Congress.



# Green Cross News . . .

## Activities of Local Safety Councils and Chapters

Compiled by TOM A. BURKE

Director of Local Safety Programs, Field Organization, NSC

### Managers Will Meet

All local safety council and chapter managers and state council administrators are cordially invited to attend the Annual Managers Conference to be held at the Stevens Hotel, Chicago, Friday and Saturday, October 5 and 6. General administrative problems, with special emphasis on programs and finance, will be discussed by the 100 managers in attendance. The Procedures Committee of the Conference of Local Safety Organizations will meet on Sunday, October 7 and the annual meeting of the Conference is scheduled for Monday afternoon, October 8. This session will be held at the LaSalle.

### New Publication

The Greater Cincinnati Safety Council is now publishing an attractive 4-page monthly *News Letter*. The third page features the monthly traffic death summary in official tabulation form. Kenneth R. Miller, executive director of the council, announces that the organization's popular "Rule of the Month," previously distributed in poster form, will also be seen soon as a large display in the Safety Inspection Lane building.

### Keeler Succeeds Smith

Lieutenant William H. Keeler, safety supervisor of the Bureau of Police, Rochester, N. Y., succeeds Edwin S. Smith as manager of the Rochester Safety Council. Smith resigned to become director of the Eastern Regional Office of NSC in New York City. Keeler took over his new duties July 1. He became school safety officer for public and parochial schools in 1938 after serving as an investigator with the

Accident Prevention Bureau of the Department. He became safety supervisor in 1947 and was made a lieutenant soon afterward. The new manager has had wide experience working with the schools and has done extensive radio work. In addition to his safety specialization he has been identified with activities of the Red Cross, American Youth Hostels, Inc., Sons of American Revolution and the "Red Wing Baseball Club's Knot-hole Gang" composed of 28,000 youthful baseball fans.

### Modern Salesmanship

Twenty-two volunteer membership salesmen, hand-picked by the Grand Rapids Safety Council, brought in 61 new memberships and approximately \$1500 for that organization during an intensive door-to-door drive recently. Although very few of them knew much about the work of the council or the safety movement, practically all had wide experience in sales work. Some were sales managers of important industrial companies. Each was given a special sales kit showing materials, services and accomplishments of the council. The salesmen were briefed carefully, then went out and got results. Manager Ross Farra and his Board are highly pleased at the outcome. Every man saw every prospect and applied modern sales methods. They understood the technique and the requirements of salesmanship—and they produced.

### Council Heads Named

Governor Elbert N. Carvel of Delaware has appointed 14 members to the recently established Civil Defense Advisory Council. The list includes Col. J. James Ashton, manager of the Delaware

Safety Council and NSC Board member, and Frank J. Harty, a former president of that organization. The Defense Council has broad powers as an advisory group and one of its first tasks will be the purchase of organizational equipment and medical supplies for the state-wide program.

### Georgia Council Change

Garland T. Byrd, youthful attorney and former state legislator, has been chosen manager of the Georgia Safety Council, Georgia's state safety organization. He has been prominent in state politics and during World War II became one of the state's outstanding war heroes, winning several decorations including the Purple Heart.

### Battle of the Champs

Two of baseball's most famous long-ball hitters—Ted Williams and Ralph Kiner—top sluggers in their respective leagues, matched bats when their teams, the Boston Red Sox and the Pittsburgh Pirates played an exhibition game in Pittsburgh on the night of August 6. The game was arranged by the Pittsburgh *Sun Telegraph* and the Western Pennsylvania Safety Council. The proceeds were turned over to the Council for an expanded child safety program. A big crowd witnessed the game at Forbes Field. Safety Council officers, committee members and many members of the Pittsburgh Council helped in promoting the sale of tickets throughout the Pittsburgh area.

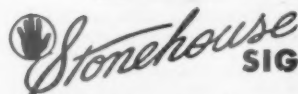
### Jacksonville TV Series

A TV traffic safety program featuring a dramatic presentation of "The Accident of the Week" with timely suggestions on how the

# Stonehouse Stock Worded FALLING HAZARD Steel Signs



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"Signs Since 1863"

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National Safety News, September, 1951

**NO INSTRUCTIONS NECESSARY  
WITH THIS  
EXTINGUISHER!**

**IT'S A  
RANDOLPH!**

From bracket to blaze in split seconds!

No valves to turn, no nozzles to adjust; just point and press your thumb and Randolph's cloud of snowy CO<sub>2</sub> kills fire completely!

Non-damaging Randolph CO<sub>2</sub> evaporates without a trace, is non-toxic, won't conduct electricity, deteriorate or freeze. And *all* Randolph Models are Underwriters' Approved.

**A complete line of extinguishers and automatic systems**

Learn how Randolph gives your plant panic-proof, positive fire protection! Write Randolph Laboratories, Inc., 2 E. Kinzie St., Chicago 11, Illinois.



**RANDOLPH** SIMPLIFIED FIRE EQUIPMENT

tragedy might have been averted, followed by the appearance of a "Guest of the Week," was inaugurated on Station WMBR-TV on June 25. The program runs 15 minutes on succeeding Monday nights from 10:15 to 10:30. It is produced by the Jacksonville Safety Council in cooperation with the North Florida Society of Safety Engineers, the Mayor's Safety Commission and the Florida Citizens Safety Council. Mrs. Lennie L. Humphries, manager of the Safety Council, directs the programs which have attracted a large TV audience in the Jacksonville area. Mayor Haydon Burns was the featured guest on July 2. The week's most important accident is reenacted through the use of dramatic photographs and an especially designed magnetic board.

#### **Dark Field vs. Light Field Microscopy**

Tests conducted at the Central Experiment Station of the Bureau of Mines at Pittsburgh reveal that smaller particles of silica dust and bituminous-coal dust can be detected by a dark-field counting method than by a light-field one.

The smallest particles of either dust determined by the light-field microscopic technique was found to be about 1 micron, compared with a minimum size of about 0.28 micron revealed by the dark-field technique.

The report also discusses dust-counting methods and the related principles of microscopy. Techniques of sampling with impinger apparatus and of counting dust particles in resulting samples are described.

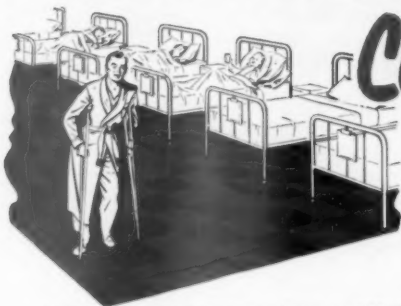
A free copy of Report of Investigations 4802, "Size of Smallest Particles Determined in Impinger Dust-Counting Methods," can be obtained from the Bureau of Mines, Publications-Distribution Section, 4800 Forbes Street, Pittsburgh 13, Pa.

#### **POSITION WANTED**

Safety Engineer available who is familiar with Mechanical, Construction, Electrical and Automotive Engineering, also all phases of the Insurance business and Elevator Inspections. Address Box 421, NATIONAL SAFETY NEWS.

# A New Kind of Anti-Slip PROTECTION AT LOW COST

## Contains No Wax!



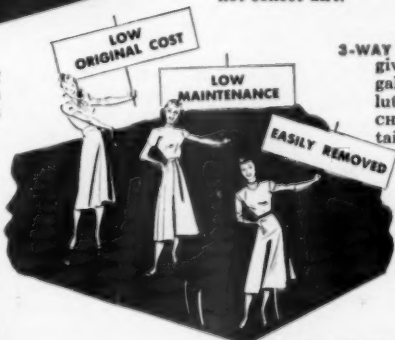
**ANTI-SLIP**—CHECK-SLIP has been certified "anti-slip" by Underwriters' Laboratories, Inc. Yet CHECK-SLIP is not sticky—even in warm, humid weather.



**LONG-WEARING**—CHECK-SLIP gives lasting protection under all kinds of service, on all floors, including rubber and asphalt tile, terrazzo, linoleum and wood.



**HARD AND LUSTROUS**—SELF-POLISHING CHECK-SLIP dries quickly to a hard, bright finish. Does not leave soft film and does not collect dirt.



**3-WAY ECONOMY**—(1) CHECK-SLIP gives better coverage, gallon for gallon. (2) CHECK-SLIP can be diluted after the first two coats. (3) CHECK-SLIP is economical to maintain, easy to remove.

### MORE CHECK-SLIP FEATURES

- FINISH RENEWED BY BUFFING
- NOT SELF-CONTAMINATING
- NON-INFLAMMABLE
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**Try CHECK-SLIP yourself . . . Ask your wholesaler for WHIZ CHECK-SLIP or write today!**



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# The Safety Library

Books, Pamphlets and Periodicals of Interest to Safety Men

## BOOKS AND PAMPHLETS

### Industrial Lung Diseases

*Industrial Lung Diseases of Iron and Steel Foundry Workers.* By A. I. McLaughlin. Published by His Majesty's Stationery Office, London, 1950. XIV plus 282 pages with 51 plates. \$4.75.

This is the report on an investigation which was begun in 1943 and has continued from time to time ever since. It has involved the investigation of over 3,000 workmen in 19 foundries. Among these 3,000 odd workers 2,767 males were included in the statistical analysis of the X-ray pictures. The chest X-rays of approximately 250 females were not included.

Seventy-one per cent of the X-rays examined showed no abnormal X-ray changes, 17 per cent showed early reticulation and 2 per cent showed nodulation. The incidence of abnormal X-ray shadows was much higher in the steel foundries than it was in the iron foundries. As would be expected, there was a higher incidence of X-ray abnormalities among the cleaning occupations than among molders or laborers.

Detailed results of clinical examination and pathological examination of the lungs are given for 64 workers in the iron and steel industry. Four-fifths of these cases coming to autopsy showed nodular silicosis. This, of course, gives an indication of the incidence of silicosis in the plant since the group coming to autopsy was obviously selected because of the lung diseases of its members.

It is unfortunate that no environmental studies were carried on together with the clinical studies reported here but it seems to have been impossible under the setup of the English Factory Inspection Division. A dust sampling investigation was made of one foundry which was engaged in the

centrifugal casting of iron pipe. Clinical examinations were made of 40 workers in this plant and X-rays of 21. The dust concentrations found were quite high and the clinical examinations showed the abnormalities which would be expected.

Dust surveys were also made of two steel foundries with clinical and X-ray investigation of some of the workers in these plants. The dust counts found were high and the lung abnormalities found were correspondingly high.

The detailed descriptions of foundry conditions and clinical conditions of the individuals working in the foundries are of considerable value although one gets the general impression that dust conditions are generally not as well controlled as in foundries in this country.

F. A. Van Atta

### Beryllium Intoxication

*Pneumoconiosis—Beryllium, Bauxite Fumes—Compensation* edited by Arthur J. Vorwald with the collaboration of Manfred Bowditch, Thomas M. Durkan and Theodore C. Waters. Published by Paul B. Hoeber, Inc., Medical Book Department of Harper & Brothers, 49 East 33rd Street, New York 16, New York, 1950. XII plus 659 pages. \$7.50.

This Leroy U. Gardner Memorial Volume is the detailed record of the Sixth Saranac Symposium held at Saranac Lake in the fall of 1947 and devoted to the problems of beryllium intoxication and shavers disease. While the publication of this material has been considerably delayed and the study of beryllium intoxication, in par-

ticular, has gone ahead very rapidly in the interim, the work has been kept up-to-date by the inclusion of a bibliography of everything which has been published on beryllium up to the beginning of 1950.

This volume combines most of the aspects of the beryllium problem in one place. The 60 odd participants in the formal papers and the discussions had great experience in the industrial use of beryllium metal and its compounds, in the production of beryllium and its compounds from the ores and in both the clinical and experimental study of the chemistry and toxicity of these compounds.

The symposium started with the description of the production of beryllium compounds and beryllium alloys and their industrial applications. The acute beryllium poisoning and pneumonitis as seen in the early 1930s in the processing of beryllium ores was described and some case histories put in the record by H. S. VanOrdstrand and Joseph DeNardi. The more chronic or delayed disease was then discussed in its clinical epidemiologic, physiologic and pathologic aspects and the problems involved in making a diagnosis of beryllium pneumonitis were discussed in considerable detail.

The final discussion was on toxicity studies on both humans and experimental animals and discussion of fruitful experimental methods with both animal experiments and chemical and physical methods of determination and the course which future studies should properly take.

The shavers disease was discussed in somewhat the same order but in considerably less detail since it is considerably less well known and less widespread.

The following discussion of workmen's compensation coverage of occupational disease claims is much more general.

For the general worker in industrial health fields this volume makes fascinating reading because

—To page 103

## Index

Index for the NATIONAL SAFETY NEWS, Vol. 63 (January through June 1951) will soon be ready for distribution.





# Trained Eyes *Stay* Trained...

when **eye**  
**SAVERS** stand guard!

Trained eyes keep their skill when protected by Watchmocket's MODEL I-N EYE-SAVER—the popular heavy duty goggle! Get complete information from your safety supplier, or write direct.

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## SURE STEPS TO PROTECTION



Volatile liquids spread flames which caused \$273,000 estimated damage to the Globe Solvent Co. Feb. 6, 1948.



**BUFFALO**  
better-built

**NEW Air-Flo**

Underwriters' Laboratories Approved

**VL EXTINGUISHER**

In emergencies like the one above, quick action with Buffalo's new Air-Flo Extinguisher can save lives and property. Big dual air pumps instantly produce internal air pressure which forces a continuous, steady stream of flame-killing Vaporizing Liquid up to 30 feet... ideal protection against flammable liquid and electrical fires.

Air-Flo's generous one gallon capacity, efficient operation down to 50° below zero, and Dryex internal corrosion prevention make it ideal for years of dependable protection.

Order Buffalo fire protection today! Consult your Classified Telephone Directory or write for your nearest Buffalo representative.

**BUFFALO FIRE APPLIANCE**  
CORPORATION  
DAYTON 1, OHIO

## Honor Discoverer of Pole-Top Resuscitation

For his Pole Top Method of Artificial Respiration, which has already saved over one hundred lives among the men who climb powerline poles in maintaining the nation's vital electric service, E. W. Oesterreich, general superintendent of distribution for Duquesne Light Company, Pittsburgh, Pa., was honored by the electric industry and national safety organizations on June 6, at the 19th Annual Convention of the Edison Electric Institute at Denver.

Mr. Oesterreich was presented with a Citation for Distinguished Service and a commemorative bronze created for the occasion.



Formal recognition for what his citation terms a "signal contribution to humanity and to the electric industry" came to Mr. Oesterreich twenty years after he evolved the resuscitation technique bearing his name. In 1931, he had concluded, after careful study, that the familiar Schaefer prone pressure method of artificial respiration was not frequently successful in resuscitating those receiving electric shock while working on poles, because the time required to lower the victim to the ground for application of the prone pressure method meant that artificial respiration was given too late.

## Practice Fire Fighting On Field Trips

To get first hand experience in fire extinguishment, 28 members of senior class in fire protection engineering at Illinois Institute of Technology recently took part in a two-day demonstration at the test grounds of Ansul Chemical Company, Marinette, Wis. The field trip was arranged by Professor John J. Ahern, director of Illinois Tech's fire protection and safety engineering department.

Since most of the students had already lined up jobs involving industrial fire protection, emphasis was placed on industrial fires. The IIT men, with Ansul technicians at their elbows, first worked with hand extinguishers on small fires. As they gained familiarity with dry chemical, carbon dioxide, vaporizing liquid, foam and water spray equipment, their ability to fight fires rapidly increased.

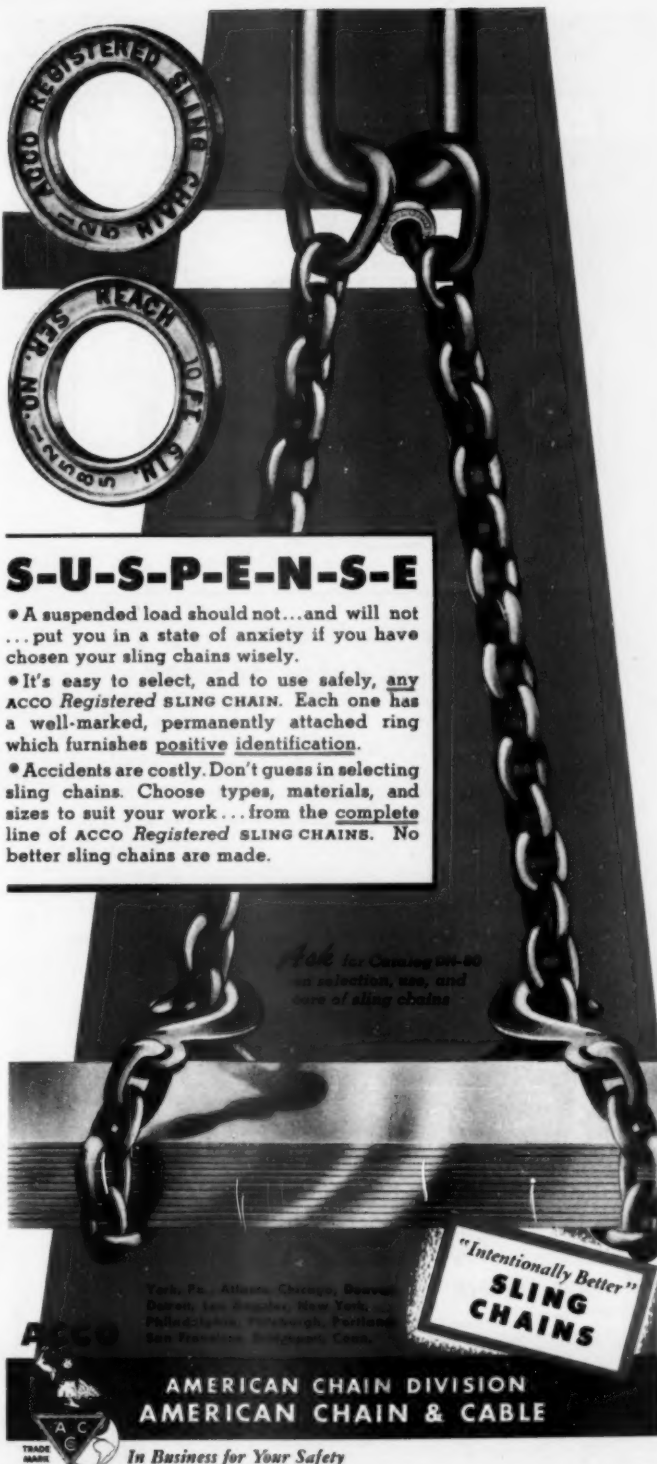
A typical big blaze was a 300 square foot pit filled with 400 gal. of fuel oil. The young engineers tried three different pieces of equipment on this fire: 350-pound dry chemical unit; water spray 1½ inch nozzle without applicator, hydrant pressure; mechanical foam 1½ inch hydrant pressure.

Other spectacular fires included vertical and horizontal propane jets, overhead flange leaking gasoline and a gasoline jet. Fuel pressure ran about 80 pounds.

In one case a student "missed" with a hand extinguisher, ran back for a different type and knocked out the fire. In other cases, technicians took over with standby equipment when the students' supply of extinguishing material was exhausted.

The training had its element of danger. One engineer-student, caught by an unexpected "flash-back" of flame, dropped to the ground, and to safety. Shrugging off a small radiant heat burn, he returned to the fire-fighting.

At the end of the class' training, Harley G. Hastert, general manager of Ansul's fire extinguisher division, gave each man a small extinguisher and a special diploma — "... for having survived the rigors, tortures and indignities of the fire school."



**S-U-S-P-E-N-S-E**

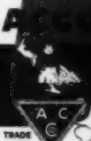
- A suspended load should not...and will not ...put you in a state of anxiety if you have chosen your sling chains wisely.
- It's easy to select, and to use safely, any ACCO Registered SLING CHAIN. Each one has a well-marked, permanently attached ring which furnishes positive identification.
- Accidents are costly. Don't guess in selecting sling chains. Choose types, materials, and sizes to suit your work...from the complete line of ACCO Registered SLING CHAINS. No better sling chains are made.

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More for the money  
made it sales leader

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It's no accident when a product leads its field. SOL-SPEEDI-DRI is—and always has been—America's largest selling oil and grease absorbent. Big users and independent laboratories have tested it. We are constantly testing it. All factors considered, SOL-SPEEDI-DRI gives you *more for your money*. Send coupon today for free sample and brochure about how to keep your floors clean and slip-proof with SOL-SPEEDI-DRI!

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## THE HONOR ROLL

Records of operation exceeding 500,000 man-hours, or one year, if exposure exceeds 300,000 man-hours, without a disabling (lost-time) injury are invited.

### Baldwin-Lima-Hamilton Corp.

Eddystone Div., Philadelphia, General Plant Service Dept.—130 days, 500,100 man-hours as of July 19; continuing.

### Barnes Drill Co.

Rockford, Ill.—August 1, 1949, to July 12, 1951; 1,050,000 man-hours.

### Brown-Forman Distillers Corp.

Blue Grass Cooperage Co.—1,500,000 man-hours.

### Calanese Corp. of America

Chemcel Plant, Bishop, Tex.—September 20, 1950, to July 16, 1951; 1,034,616 man-hours; continuing.

Summit, N. J.—May 3, 1950, to July 6, 1951; 500,000 man-hours; continuing.

### Graniteville Co.

Graniteville, S. C.—1,706,434 man-hours.

### Hanna Engineering Works

Chicago—August 3, 1949, to March 26, 1951; 666,656 man-hours.

### Hercules Powder Co.

Parlin, N. J.—October 24, 1950, to July 1, 1951; 3,123,607 man-hours; continuing.

### The Lord Baltimore Press

Baltimore, Md.—626,174 man-hours since November 30, 1950; continuing.

### Montaup Electric Co.

Somerset, Mass., Station—July 15, 1950, to July 15, 1951; 413,000 man-hours; continuing.

### Republic Steel Corp.

Youngstown District, Bessemer Loom & Billet Dept.—One year, 577,100 man-hours as of July 9, 1951; continuing.

Youngstown District, Order & Shipping Dept.—Three years, 2,340,877 man-hours, as of May 27, 1951; continuing.

Youngstown District, Coke Plant Dept.—Two years, 1,070,239 man-hours as of June 15, 1951; continuing.

Youngstown District, Strip and Bar Mills—One year, 798,198 man-hours as of July 1, 1951; continuing.

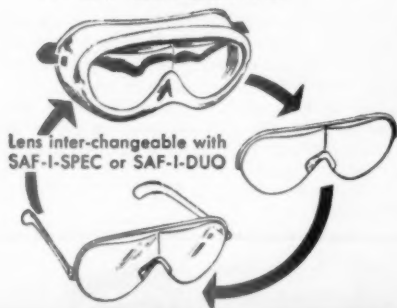
Chicago District—July 30,

National Safety News, September, 1951

The **SAF-I-DUO** with interchangeable lens offers versatile protection★



- ★ IMPACTS
- ★ DUST
- ★ FUMES
- ★ ACIDS
- ★ CHEMICALS
- ★ SPLASHES



Lens inter-changeable with  
SAF-I-SPEC or SAF-I-DUO

### THE SAF-I-DUO IS MADE IN TWO MODELS WITH FOUR TYPES OF VENTILATION

The model for general use has an OPTILITE® lens and is available with regular vents, large vents, screen vents and no vents. The special model for Acid and Chemical use has acid resistant frame, lens and head-band and is available with screen vents or no vents.

The velvet soft Vinyl frame of the SAF-I-DUO is resistant to acids and alkalis, easy to clean and long wearing — fits the contour of all faces snugly offering full protection. All one piece SAF-I-DUO lenses are interchangeable and optically correct meeting federal specifications for optical qualities and impacts. All models of the SAF-I-DUO can be worn over prescription glasses and its versatility offers highly economical eye protection for practically every job in the plant. The one piece replaceable lenses cost only a fraction of a dollar each and can be interchanged in a few seconds by anyone without the use of tools.

*Write for literature and prices.*

## UNITED STATES SAFETY SERVICE CO.

Kansas City 6, Missouri

IN CANADA

Branches in Principal Industrial Cities

PARMELEE, LTD.

TORONTO



1950, to April 13, 1951; 4,000 employees; 6,227,560 man-hours. (This is believed to be an all-time record for a completely integrate steel plant operation.)

**Schenley Distillers, Inc.**

Bernheim Distilling Co., Louisville, Ky.—November 17, 1950, through April 29, 1951; 678,763 man-hours.

**Southern Natural Gas Co.**

Atlanta District February 2, 1942, to June 13, 1951; 1,000,000 man-hours; continuing.

**United States Steel Co.**

Duquesne Works, Electric Furnace Dept.—July 2, 1948, to June 24, 1951; 813,106 man-hours.

Clairton Works, Steel Works Field Electrical Div.—December 12, 1948, to May 31, 1951; 509,993 man-hours.

**Utah Oil Refining Co.**

Pipe Line Dept.—February 21, 1950, to July 1, 1951; 500,000 man-hours; continuing.

**Westinghouse Electric Corp.**

Atomic Power Div., Bettis Field—February to July 1951; 1,235,282 man-hours; continuing.

**The Youngstown Municipal Railway Co.**

Youngstown, Ohio—January 4 to July 1, 1951; 500,000 man-hours; continuing.

**Westinghouse Plant Reports New Record**

A total of 5,444,523 man-hours without a disabling injury has been established by Sharon, Pa., Plant of Westinghouse Electric Corp. On June 5, 1951, an injury terminated a record that began January 15.

This tops a record for comparable operation of 5,294,960 man-hours established by the Electro-Motive Division of General Motors at Cleveland previously reported.

It isn't just kids who need watching each day;  
It's those who know better,  
but fail to obey.

Often we hold our friends by holding our tongues.

## The Reader's Point of View

Comments on topics of current interest are always welcome. They need not agree with the opinions of the editors.

### Right and Wrong

FLORENCE, ALA.—Have been browsing through *Riggers' Handbook* and believe that much could be accomplished by showing only the correct method of applying wire rope clips. By doing so the chance for error or confusion would be reduced.

An inexperienced worker looks at the diagram and sees two methods—right and wrong. Half an hour later he is confused as to what he actually did see. I think we should stress why such and such a method is wrong but picture only the correct method.

D. B. RENEGAR, *Safety Engineer,*  
*Leonard-Monsanto*

## PERFORMANCE PERFECTION?

there's proof in production with . . .

HOOD Gloves!

**Model 4703**—Full Neoprene coated, knit wrist style used in all types of general industry. Liquid proof, curved fingers, no seams on working surface.

**Model 7701**—Fully Neoprene coated with (4") cuff for use where dipping operations, spray or splash are not too high.

Yes, employee's hands in Hood Industrial Work gloves are sure of two very important benefits—ease of handling and protection. And both these vital benefits have been proven before the gloves leave the factory by Hood's famous "on the job" testing in many industries.

Shown here are just two of the many models available for your employees whatever your business may be . . . models that reflect the enviable reputation that Hood has built in more than 50 years. Investigate the advantages of Hood gloves today and you will soon see why experienced personnel in *all* industries "put on a pair of Hood gloves" when they want more efficiency, longer wear, extra comfort, important economy and more protection.

"Put your employee's hands into a safer glove"

Write today for the colorful new catalog showing the entire Hood line.

HOOD for NEW Safety PLUS

**HOOD RUBBER CO. Watertown, Mass.**

## Excess Pounds Are Threat to Health

Persuading the 25,000,000 or so adult Americans who are overweight to lose their excess poundage through intelligent dieting under medical supervision has been made a major public health project by the Metropolitan Life Insurance Company. The undertaking has the support and active cooperation of the Public Health Service of the Federal Security Agency and the American Medical Association.

The purpose is to effect an improvement in general health by reducing the incidence of disorders most prevalent among overweight persons.

"Ours is a serious and professional approach to the problem of educating the general public in the wisdom of maintaining normal or near-normal weight," said Dr. Donald B. Armstrong, public health authority and a vice-president of the Metropolitan in charge of its health and welfare activities. "Excess pounds are admittedly a threat to health, especially after age 30. They may place a burden on the heart and circulatory system, and on other vital parts of the body. While obesity is not exactly a disease, it is certainly a departure from normal health. It is closely associated with increased case and death rates from such conditions as heart disease, diabetes, arthritis, post-operative embolism, hypertension, gallbladder disease, and perhaps even cancer."

High approval and active support of the nation-wide effort is being given by such additional national agencies concerned with the overweight problem as the American Heart Association, the American Diabetes Association, and the American Dietetic Association.

The campaign is developed about the premise that 95 per cent of all cases of overweight are due simply to overeating.

"The only 'best way' to lose weight," Dr. Armstrong points out, "is through a diet prescribed and supervised by a doctor. That is the common-sense theme of our entire project."

History records only one indispensable man—Adam.

ASK ANY QUALIFIED  
AND IMPARTIAL AUTHORITY...



... HE'LL TELL YOU...

# YOUR BEST PROTECTION FOR FLAMMABLE LIQUID, GAS AND ELECTRICAL FIRES

## ANSUL DRY CHEMICAL FIRE EXTINGUISHING EQUIPMENT

You, who have seen or used an Ansul Dry Chemical Extinguisher at a fire demonstration or on an actual fire, quickly recognized its superior fire-fighting capabilities. Further investigation proves that Ansul "Water-tight Construction" provides greater dependability under severe exposure conditions.



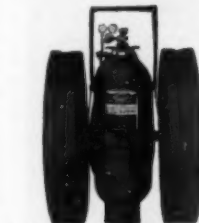
Ansul Hand  
Portable Models — 4, 4-B,  
20-B and 30-B.

Fire Chiefs, insurance inspectors, safety engineers, etc. recognize Ansul as the leader in the dry chemical extinguisher field. Ansul Fire Extinguishing Equipment and "PLUS-FIFTY" Dry Chemical have set unparalleled standards of quality for the fire extinguisher industry.

You get complete dry chemical fire protection only from Ansul. There is an Ansul Dry Chemical Fire Extinguisher of the proper size for almost every flammable liquid, gas and electrical fire hazard. Safeguard your plant and irreplaceable equipment with the BEST fire extinguishing equipment available. Protect them with ANSUL EXTINGUISHERS.

### ANSUL EXCLUSIVE FEATURES

- Patented Nozzle assures most effective stream pattern... Best results by inexperienced operators.
- Special packings in Nozzle and other parts exclude water.
- Corrosion resistant construction throughout.
- Easy on-the-spot Recharging (No tools needed).
- Quick, positive puncture operation.
- Special guard protects cartridge... rugged construction throughout.
- Ansul "PLUS-FIFTY"® Dry Chemical used exclusively.
- Field tested by thousands of satisfied customers.
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Send for File No. 716. You will receive a variety of helpful printed matter. Included is our latest catalog which describes Ansul Extinguishers of all sizes — from the small Ansul Model 4 to Ansul Piped Systems and Ansul 2000 lb. Stationary Units.

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Fire Extinguisher Division  
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## Personals

### To Direct NSC Eastern Office

EDWIN S. SMITH, who has been manager of the Rochester, N. Y., Safety Council of the Chamber of Commerce since 1946, has resigned his post to become director of the National Safety Council's Eastern Regional Office in New York City. He will have general supervision of NSC activities in the Eastern states.



Edwin S. Smith

Mr. Smith has been active in NSC affairs for several years as a member of Home and School Committees and as chairman of the Public Education Committee. He has been a member of the Procedures Committee of the Conference of Local Safety Organizations for the past year.

He first became interested in community safety as assistant to Manager Fremont Chester of the Safety Division of the Rochester Chamber of Commerce. In 1942 he became manager of the Hamilton, Ohio, Safety Council, where he served four years. In 1946 he was invited to return to Rochester to become director of the Safety Council there.

JOHN W. JAMES has been elected vice-president in charge of research of McDonnell & Miller, Inc., Chicago, manufacturers of boiler safety devices and related products.

Mr. James is best known by many heating engineers for his eight years as technical secretary of the American Society of Heating and Ventilating Engineers. He is co-author of the textbook, *Heating and Air Conditioning*, and was technical editor of the *A.S.H.V.E. Guide* for many years. He is a contributor to *Kent's Mechanical Engineer's Handbook* and is author of many articles which have appeared in engineering publications.

### Re-elected Head of Equipment Assn.

CHARLES H. GALLOWAY, of American Optical Company, was re-elected president of the Industrial Safety Equipment Association at the annual June meeting held at Skytop Lodge, Skytop, Pa.



Charles H. Galloway

Elected to the vice-presidency was EARL H. BROOKS of Safety Clothing and Equipment Company. JESS A. BREWER, Industrial Gloves Company, and G. M. GLIDEN, Acme Protection Equipment



Earl H. Brooks

Company, were elected to the board of trustees.

Carrying over as board members until next year are Frank R. Davis, Jr., Davis Emergency Equipment Company and Stanley C. Herbine, Willson Products Company. Lawrence E. Dickson, junior past president, automatically continues as a board member for another year.

SIDNEY J. WILLIAMS, assistant to the president of the National Safety Council, has been named part-time consultant to the Traffic Institute of Northwestern University. The announcement was made jointly by Ned H. Dearborn, president of the Council, and Franklin M. Kreml, Institute director.

In his new position, Mr. Williams consults with Institute staff members one day a week, primarily in connection with driver license and civil defense training programs, devoting the remainder of his time to his regular duties with the National Safety Council.

The Institute recently was selected by the Federal Civil Defense Administration to develop a nationwide traffic training program for civil defense emergencies. The Institute also has a contract with the American Association of Motor Vehicle Administrators to conduct training courses for driver license personnel.

Mr. Williams is one of the nation's leading authorities on street and highway safety. He joined the



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all year 'round with - -

# **SUPER SAFE CETOX**

**Hydraoxated carnauba floor wax  
- - It's all-weather-slip-proof!**

Come rain or shine, radically new **SUPER SAFE CETOX** gives genuine security underfoot on dazzling, beautiful floors.

**Super safe—even in  
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Here's important protection all year long—especially throughout year's 30% inclement weather when the risk of slips and falls is greatest. Snow, sleet and rain tracked onto a waxed floor acts as a lubricant underfoot. **SUPER SAFE CETOX** ends this hazard. Foot traffic has solid, secure footing on a **CETOX** dressed floor . . . whether wetted or

dry. You can't slip on **SUPER SAFE CETOX**, because the slip is chemically *hydraoxated* out of the raw material carnauba. No silicas or abrasives added! It's super safe! Because it's *hydraoxated*!

**More remarkable features**

**SUPER SAFE CETOX** quickly dries into a smooth expanse of brilliant lustre. Self-lustre **CETOX** resists soil, wear, spilled water and frequent damp moppings. In every way **CETOX** is superior! Ask your distributor for **SUPER SAFE CETOX** today, or send us his name.



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... a fire department that's on duty 24 hours a day, without vacations and without "pay"—safeguarding your property... preventing loss of life... protecting your profits... insuring employees' positions!

Your yearly insurance savings applied to the cost of a Blaw-Knox Automatic Fire Protection System converts an existing expense into a capital asset. Reductions from 50 to 90% are effected by this fully recognized fire protection—quickly amortizing the entire cost.



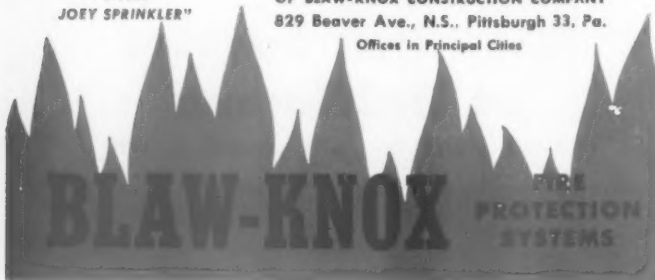
"LITTLE  
JOEY SPRINKLER"

At your request a Blaw-Knox Engineer will make a survey of your fire hazards, secure your insurance underwriter's requirements, prepare a preliminary layout of a system that will give you the utmost in fire protection, and submit an estimate of costs—all without obligation.

### BLAW-KNOX SPRINKLER DIVISION

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staff of the National Safety Council in 1913 as chief engineer and in 1924 was made director of the Public Safety Division. He has served as assistant to the president for the past six years. Mr. Williams won the 1950 Beecroft Memorial Award, annual honor conferred by the Society of Automotive Engineers for outstanding service in traffic safety.

Dr. PAUL J. WHITAKER has been appointed medical director for the West Allis Works of Allis-Chalmers Manufacturing Company. He will be in charge of the firm's hospital staff of 15 nurses and its first-aid stations with an additional staff of 20 technicians and clerical personnel.

In June of this year Dr. Whitaker was awarded a degree of doctor of industrial medicine at the University of Cincinnati. During his final year of study he obtained industrial experience at the Caterpillar plant in Peoria, Ill.

Dr. Whitaker was born in West Virginia, the son of Dr. Lewis A. Whitaker who recently retired as medical director for Weirton Steel Company, Weirton, W. Va. After graduation from the University of Pittsburgh Medical School in 1939 he spent two years there doing post-graduate work. From 1942 to 1946 he was a flight surgeon in the Pacific Theater of War.

## Obituary

### MICHAEL F. CLUNE

MICHAEL F. CLUNE, superintendent of safety for the Delaware & Hudson Railroad Corp., Albany, N. Y., died July 22.

Born March 23, 1889, at Miners Mills, Pa., Mr. Clune had spent most of his life with the D & H. A graduate of the Miners Mills schools, Wilkes-Barre Business College, International Correspondence Schools, and the Army Engineering School, he entered the service of the railroad in 1904.

He has served as telegrapher, yard clerk, train dispatcher, inspector of personnel, chief clerk to

—To page 38





Keep all Walkways Slip-proof with

# tread-sure

The Non-Slip, Brush Applied  
Abrasive Floor-Coating



Horn Tread-Sure produces a heavy long-wearing anti-skid surface on wood, concrete or steel. Tread-Sure is an abrasive filled brush-coating, simple and inexpensive to apply on any size area.

Tread-Sure is resistant to gasoline, alcohol, oil, grease, detergents, industrial waste and many types of acids. Tread-Sure provides a non-skid safety footing, giving the worker confidence and security by reducing accident hazards.

Tread-Sure maintains traction and resiliency and is comfortable to stand on. Designed for exterior as well as interior use, it may be brush applied over other paint or direct to unpainted surfaces. Used as it comes from container. Three non-glare colors—Battleship Grey, Red, Green.

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Aisles—walkways  
Ramps—gangplanks  
Grease racks—work benches  
Running boards  
Washrooms—showers  
Elevator floors—landings  
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Industrial  
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Food,  
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SCUFFING • SCRAPING • SNAGGING  
stays FLEXIBLE when cold  
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Cambridge 41, Mass.

## Appointments at Portland Cement Association

A. J. R. CURTIS, nationally known in industrial safety circles and in charge of the Portland Cement Association's Accident Prevention Bureau for the past 25 years, has assumed new duties as assistant secretary and safety consultant, according to an announcement by Frank T. Sheets, PCA president.

IVAN F. LE GORE, who since 1944 has served as assistant manager of the Accident Prevention Bureau, has been appointed manager of that Bureau effective August 1.

Mr. Curtis has been with the Association since 1916. He received his A. B. and M. E. degrees from Lewis Institute, and prior to joining the Association had served for seven years as laboratory technician and assistant engineer with the Universal Portland Cement Company. He was director of extension for PCA from 1916-1920, and manager of its Cement Products Bureau from 1920 until 1926, when he was appointed assistant to the general manager of the Association, in charge of its Accident Prevention Bureau.

In the 25 years during which Mr. Curtis has been in charge of this bureau, these companies have reduced accident frequency in their plants by approximately 83 per cent. In 1947 he was awarded the Joseph A. Holmes medal of the U. S. Bureau of Mines for leadership in safety work.

Mr. Curtis was secretary of the Cement Section of the National Safety Council for 16 years, and for many years was a member of the Council's Executive Committee and Board of Directors. He has served as a member of the President's Conference on Industrial Safety. He is a charter member of the Industrial Hygiene Foundation, a member of the American Industrial Hygiene Association, and a past president of the American Society of Agricultural Engineers.

Mr. LeGore joined the Association in 1936 as a member of the staff of the Accident Prevention Bureau, and has since served in that bureau with the exception of two years during World War II when he headed the protection program of Curtiss-Wright Corporation's Airplane Division at Buffalo, N. Y. Prior to joining the Association staff, Mr. LeGore was associated with the Safety and Health Division of Western Electric Company's Hawthorne Works in Chicago.

A graduate of Grinnell College, Mr. LeGore is a member of the American Society of Safety Engineers; a member of the Executive Committee, and program chairman of the Cement and Quarry Section of the National Safety Council; and a representative on the Council's Industrial Conference. He has taught courses in industrial safety engineering at Illinois Institute of Technology.



A. J. R. Curtis



Ivan F. LeGore



*Quality...at a  
Saving!*

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TRADE MARK

## INDUSTRIAL LENSES

The highest quality safety lenses and welding lenses are available to you now at less cost. Exceeding all Federal specifications, they are the dependable products of one of America's oldest and most skilled lens makers.

Order Penoptic\* Lenses direct from the manufacturer and save with assurance!

*Order Direct from*

**PENNSYLVANIA OPTICAL COMPANY • READING, PA.**

*Known for Fine Ophthalmic Products Since 1886*

\*PENOPTIC is the trade name of Pennsylvania Optical Company

## Production Bonuses

—From page 31

ger of being injured by such equipment if started while such work is being done.

In order to prevent accidents from this source, power must be shut off and a safety lock attached and locked on switch, control valve or points where power is turned on.

The foreman stated flatly each operator spent 15 minutes at the start of the turn and immediately after lunch in performing this task, and that he "was losing enough machine time" without making each man "lose more time" applying and removing the lock, and furthermore, "the hazard was negligible."

Pointing out the danger involved in making exceptions to the general rule, the Safety Department representative at the meeting gently but firmly insisted adherence to the rule was imperative and that possibly a careful job analysis was indicated.

The discussion produced the following results:

1. The job of lubricating was assigned to one man each turn responsible for servicing all the machines.
2. Total time in man-hours on the specific job has been reduced from eight to two hours per turn.
3. The necessity of keeping lubricating supplies at each machine has been eliminated and housekeeping has improved perceptibly.
4. The one man now performing the job conforms to the Safety Order and locks out each machine as he works on it.

It would take another Industrial Safety Panel to sift the innumerable illustrations upon which we can draw to decide the outstanding example. As a matter of fact in the past several years from several hundred work simplification ideas placed in effect, we realized an estimated savings of \$200,000. Most of these work simplification ideas embodied questions on safety. This program is spearheaded by the Industrial Engineering Department which works closely with the Safety Department on questions of safety.

The foregoing illustrates that through group, departmental, and

plant safety meetings, plant inspections, and analyses of working procedures, changes made in the name of safety are an almost daily occurrence in Republic Steel Corporation. Many of these changes not only result in gains in production efficiency and economy but also pay immeasurable benefits in employee morale to the betterment of employee-employer relationships.

MR. GRIFFIN:



An outstanding example of our experience of production gains that were the direct result of changes caused by the safety department

was on one of our current series of gas jobs, in which our machinery division is installing measuring stations, or metering stations, where city utility companies tie in and secure gas from the transcontinental pipe lines.

The normal tie-in to the pipe line of the metering station involves about 20 linear feet of welding on a "punkin," generally in a deep ditch. Normal procedure had been to dig a pretty straight ditch, just large enough for the welder to reach around the pipe, and this requires shoring.

Because of the possibility of a rush of gas, even when the line had been purged, and because the welder was in a rather tight spot so that if any gas became ignited he would be severely burned, if not killed, our safety supervisor worked out a procedure which has been universally adopted.

This was to hog out a wide ditch several feet wider at each side of the "punkin" than the pipe so that the welder would have more room to work and room to escape. This resulted in the following economies:

1. No shoring was needed.

2. Two welders could work instead of one.

3. The jobs were normally finished in 4 hours instead of 8, 10 or 11.

4. The customer's transcontinental pipe line was out of service a much shorter period of time.

MR. NUERNBERGER:



The many factors that determine productive efficiency are not easily separated. There is also the danger, when using an out-

standing example, of trying to use it as the rule, even though it may be the exception. Where various factors of productive efficiency can be separated and evaluated and the amount of improvement determined, it is always helpful to use examples to support safety's contributions to production.

To simplify and cover the various ways in which the consideration of safety affects productive efficiency the following examples are separated into four categories. These examples are all actual cases, and the initial reason for the change was a hazard in the old operation. Actual injury was not necessarily the cause of the change.

1. Cases of increased productive efficiency directly attributed to the use of safety devices.

As an example we will consider a punch press forming operation on a small part approximately 5 x 2 inches. The operation was changed from a two-hand control arrangement to foot treadle, use of tweezers, pull-out device and air injection. This resulted in a 4 per cent improvement in productive efficiency.

Another example is a punch press forming operation on a part approximately 7 x 7 inches. The job was changed from a tweezer feed only to the use of hand feed (not into the danger zone of the die) and the use of pull-out de-

—To page 79



## BAUSCH & LOMB OCCUPATIONAL VISION SERVICE Case History

### Percentage of Workers Meeting Visual Requirements Tripled On One Western Electric Job

BEFORE  
O.V.S.  
PROGRAM

SATISFACTORILY MEETING  
VISUAL REQUIREMENTS

NOT MEETING  
VISUAL REQUIREMENTS

29.6%

PREDICTED  
RESULT FROM  
O.V.S. PROGRAM

SATISFACTORILY MEETING  
VISUAL REQUIREMENTS

NOT MEETING  
VISUAL REQUIREMENTS

68%

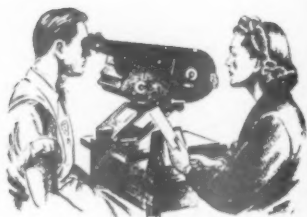
ACTUAL  
RESULT WITH  
O.V.S. PROGRAM

SATISFACTORILY MEETING  
VISUAL REQUIREMENTS

88.2%

Preliminary to testing of workers under the Occupational Vision Service program, Supervisors of the group of Key Adjusters at one Western Electric plant rated the job performance of their workers; 29.6% were classified "satisfactory in meeting visual requirements," 70.4% "unsatisfactory." On the basis of expected performance when visual standards were established, it was predicted that 68% would prove satisfactory. After the visual test standard had actually been applied for six months, a performance check-up revealed that 88.2% of screened key adjusters rated "satisfactory" on job performance.

## A PROVED METHOD.....



## To help your plant make money 9 Ways!

It's a matter of record that 4 of every ten industrial workers are visually unqualified for satisfactory performance on their jobs (established by the records of millions of visual performance tests of industrial workers in more than 4,000 different job categories). When visual skills are correlated to job requirements, working efficiency is notably increased. The Bausch & Lomb Occupational Vision Service is a scientific method for meeting this problem of "Eyes for the Job." *Employee participation is voluntary...and workers like the program.* Benefits which accrue in plants using O.V.S. (benefits which can accrue in your plant, too) include:

1. Improved quality of production
2. Increased production per worker
3. Reduced waste of materials and work rejects
4. Improved accident record
5. Reduced labor turnover
6. Lowered training cost
7. More effective placement
8. Reduced absenteeism
9. Improved employee relations

## MAIL TODAY!

Send for the brochure "Eyes Right for the Job," which tells what the Bausch & Lomb Occupational Vision Service is, how easily it can be administered in your plant, and at what low cost.



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Please send me the brochure "Eyes Right for the Job," and complete details on the Bausch & Lomb Occupational Vision Service.

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Company .....

Street ..... City ..... Zone ..... State .....





## McDonald SAFETY BELTS



### Finest Materials Rugged Construction Maximum Safety

☆ **LIGHTWEIGHT!** Both belts pictured here are lightweight for added working comfort and safety. Yet they are exceptionally durable under hard use.

☆ **WIDE ADJUSTABILITY!** Belts are quickly and easily adjustable from 28" to 48". They are manufactured to finest quality specifications.

☆ **TYPE "S"**—Quick Cast Off Derrickman's Belt. (Pictured at left.) Wearer may free himself instantly. Weighs 1 lb., 10 oz. 3" body pad—D ring always stays in same relative position.

☆ **TYPE "R"**—Derrickman's Belt. A well-made, sturdy belt. Weighs only 1 lb., 13 oz. Adjusts easily. (Shown at right, above.)

Write for circular on complete line of belts!

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Manufacturers & Distributors  
of Industrial Safety  
Equipment



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## Extend Eye Protection to Construction and Service Workers

**F**OR many years Otis Elevator Company has had an active and effective eye protection program in manufacturing plants. Recently the program was extended to include field employees engaged in the construction and installation of elevators and maintenance and service work in connection with elevator operation.

Over a period of two years an experimental program was conducted among the field forces in the New York area. This proved so successful that it was decided to expand the program to cover activities throughout the United States.

Following the introduction of this program, the New York zone achieved the most favorable experiments of all the company's zones from the standpoint of eye injuries.

At the beginning of the program a letter was sent out from the headquarters safety committee to all zone managers outlining the plan. Following are the essential points of company policy as announced:

1. Make available spectacle type prescription and non-prescription goggles to all outside employees engaged in operations which may expose them to eye injuries, such as drilling, grinding, chipping, and even to the casual exposures to dust and foreign bodies in the air. These additional safeguards are to be worn by all employees while working and should be supplemented by cup goggles or eye shields as the occasion demands.

2. Prescription spectacle type goggles are to be provided without charge to all outside employees whose sight requires corrective glasses and are engaged in operations which expose them to eye injuries.

Expenses in connection with purchase and maintenance of eye protective equipment are charged against the zone's safety account. The headquarters safety committee recommended that a meeting be held attended by representatives of the optical company and the zone safety committee to

promote the use of eye protection by getting the information to employees and developing procedures for handling cases where prescription goggles are required.

The plan also included training of superintendents and supervisors in fitting non-prescription goggles.

To assist in getting the eye conservation program started the following materials were sent to the various zones:

1. An illustration of the type of goggle and goggle case to be provided.

2. Names and addresses of the optical company's representatives selected to service the zone.

3. Copy of letter to be written by the zone to the optical company establishing their ordering and billing procedures.

4. Copy of letter to be written by the zone when placing orders for prescription safety goggles.

5. Draft of letter construction with supporting papers to be sent by zone manager to department heads when launching program.

6. Draft of letter to be sent by zone construction manager to field employees announcing the program.

7. Draft of letter to be sent by zone service manager to field employees announcing the program.

8. Copy of prescription goggle receipt form to be mailed to employee by the optical company at the time they send his prescription goggles. This form is signed by employee on receipt of goggles. This form is also used as a receipt form by employees receiving non-prescription goggles.

9. Summary of number of pairs of non-prescription spectacle type safety goggles that should be initially purchased by the zones.

10. Procedures for instructing superintendents and supervisors in fitting non-prescription goggles.

### New York Cited for Employee Safety

A special citation in recognition of New York City's substantial contribution to the safety movement was extended to Mayor Vincent R. Impellitteri, June 11, 1951, at City Hall, New York, by Ned H. Dearborn, president of the National Safety Council.

In part, the citation read: "The program of accident investigation, technical safety training, and employee education undertaken by the City of New York is a most commendable effort, one which

# Put Safety Brakes On Your Floors



## with **Ves-Cote** FLOOR WAX

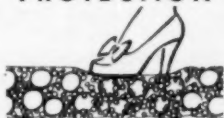
There is new safety in walking when floors are finished with Ves-Cote . . . because Ves-Cote contains a new and proven anti-slip agent, DuPont's "Ludox"® colloidal silica. These minute particles of "Ludox"® colloidal silica create excellent sole and heel traction—offer effective **braking action** for each step.

In addition to safety, Ves-Cote dries to a high luster; is long-wearing; water-resistant; easy to apply and dries quickly.

If you need **safe** floors, yet demand **attractive** floors—Ves-Cote is your answer.

\* Trademark of E. I. Du Pont de Nemours & Co., Inc.

### ANTI-SLIP PROTECTION



When you step on Ves-Cote, the weight of the foot forces the hard "Ludox" colloidal silica spheres into the wax particles, providing superior braking action. This way, Ves-Cote gives greater slip protection.

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Learn about Frost's SURE-FOOT Non-Slip Abrasive Paint—the paint with the positive traction that remains non-slip wet or dry.



will eliminate these potentially dangerous areas—whether surfaced with steel, aluminum, wood or concrete:

- Stairways
- Inclines
- Aisles
- Landings
- Traffic Lanes
- Sidewalks
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**EASY TO APPLY—SURE-FOOT** spreads like ordinary paint on any clean, dry surface. No formulas to mix and no special tools or skilled workmen required in its easy application.

**ECONOMICAL**—Low in initial cost, SURE-FOOT offers low cost coverage . . . costs less than 10¢ per square foot installed.

**EASY TO RE-PAINT**—Carbide crystals provide the non-slip element in Frost's SURE-FOOT Paint. Easily renewed where heavy traffic eventually wears through. Just re-paint—no stripping or removing of old paint.

Write Today . . . to Dept. B. for the SURE-FOOT Bulletin. Discover for yourself how inexpensively you can eliminate slippery conditions in your plant.



will continue to reduce financial loss to the city and personal suffering to its employees."

Over 300 prominent visitors and city officials attended the Accident Control Program ceremonies in the Board of Estimate Chambers. The entire program was broadcast over Radio Station WNYC.

The Mayor's Annual Safety Awards based on departmental safety improvement during 1950 included the presentation of the First Prize Trophy to the Honorable Robert F. Wagner, Manhattan Borough President whose department reduced the frequency of injuries from 41 per million man hours to 33 per million man-hours. This represents a 19 per cent improvement. Mr. Wagner's staff includes Safety Coordinator William VandenDries and Gene Landi.

Mayor's Second Prize Trophy was presented to Fire Commissioner George P. Monahan for the Fire Department's 16 per cent improvement in reducing the frequency of injuries from 49 per million manhours to 41 per million manhours. The Fire Department's program was directed by Dr. Harry N. Archer, Deputy Fire Commissioner, and Chief J. J. Eich, Safety Coordinator.

The ceremonies were opened by Abraham D. Beame, Assistant Director, Bureau of the Budget, who thanked Dr. Harry N. Wright, president, City College, for the services of Alfred R. Lateiner, consulting director of the program.

Mayor Impellitteri praised the cooperation shown by the commissioners and the safety coordinators in bringing about a 13 per cent improvement since the program's inception in the spring of 1948. The Mayor stressed the humane objectives of the program, which involves 160,000 employees.

### Safety Courses Offered By New York University

Courses in industrial and traffic safety are announced by the Center for Safety Education, Division of General Education, New York University, for the fall term beginning September 24. The ex-

panded curriculum makes it possible for the students selecting a full program of eleven courses to secure a Certificate in either Industrial Safety or Traffic Safety.

The following courses will be offered in the fall term:

**Required Courses:** Accident Prevention—Its background, Objectives, and Relationships; The Philosophy and Basic Principles of Accident Prevention; Industrial Hazards—Mechanical and Personal. Control Methods; Fire Prevention and Protection Inspection; Organization and Administration of Traffic Safety Programs—Industrial, Community, and Governmental; and Marine Accident Prevention.

**Elective Course:** Vision in Industrial Safety and Motor Vehicle Operations; Effective Public Speaking; Principles of Safety Inspection.

All courses are given in the evening.

### Abandoned Boxes Spell Death

One of the worst hazards in the refrigerator industry is created by cabinets which are discarded in accessible places with hinges and latches still in place, according to George J. Schuld, international safety director of the Refrigerator Service Engineers Society.

Since November 1946 reports on 46 suffocation deaths resulting from persons being trapped inside these cabinets reached the Society's safety committee office. The number of deaths is probably larger since, doubtless, there are many cases about which the safety committee never hears.

These abandoned refrigerator units seem to have an irresistible and often fatal attraction for children. Frequently, when a child crawls into such a cabinet he either deliberately closes the door behind him, or else it swings shut and latches of its own accord, trapping the child inside.

It takes only a few minutes to remove the hardware from any discarded refrigerator on your premises. If for some reason this is impractical, cabinets can be stored with their doors up against a wall so that access to the interior is impossible.



S-410



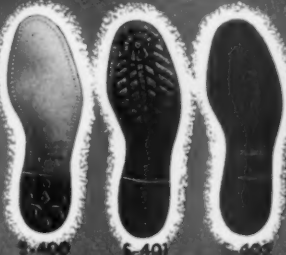
S-402



S-417



S-470



S-400

S-401

S-403



S-455

SAFETY SHOE NO. S-402 HAS A VUL-CORK SOLE.  
SAME SHOE AVAILABLE WITH OAK LEATHER SOLE  
(NO. S-400), WITH NEO-CORD SOLE (NO. S-401).

## "STITCHED WITH **THREAD OF DACRON\***

\*DU PONT Trademark for Polyester Fiber.

Shoes illustrated  
above available  
in Brown Upper  
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*Free*

**BROCHURE**—"What's  
New in Safety Shoes"

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for every job in industry"

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## *Industrial*

PLANT MEN EVERYWHERE ARE  
TALKING ABOUT **THREAD OF DACRON**,  
POLYESTER FIBER—THAT NEW AND REVOLUTION-  
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THE STITCHING OF

## **RICO SAFETY SHOES!**

### *Look at these 6 BIG Features*

- 14 times the abrasion resistance of conventional thread. Reduces scuffed-out sole stitching.
- Longer lasting and more serviceable.
- Resistant to acids, alkalis, bleaches and common solvents.
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**RICO SAFETY SHOES STITCHED WITH  
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# Safety

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Slips are costly . . . and far too frequent. In fact, they cause one in six of all disabling accidents. You don't have to put up with greasy, oily, hazardous floors. The cure is simple . . . and economical. For safety underfoot, use easy-to-apply Fera-Mat or Ferrox floor coverings.

## FERA-MAT facts

- Peel it...roll it...and walk on it in safety.
- Comes in 6" x 24" cleats that are ideal for stairs.
- Covers large floor areas quickly... cuts costs.
- Goes down on any clean surface... and stays there.
- Diamond-hard surface, yet easy to clean.



FERA-MAT

## FERROX facts

- Open the can...trowel it on... say so-long to slips.
- Perfectly suited for machine areas and uneven surfaces.
- Gives excellent coverage...40 square feet to gallon.
- Really sticks...resists oil, chemicals and weather conditions.
- Costs 1/3 as much as fabric-backed floor coverings.



FERROX

Take your choice of either FERA-MAT or FERROX, depending on your plant conditions. Look into American Abrasive's line of non-slip treads, plates and gratings. *Fact Folder on Safety Floorings* contains data on Fera-Mat, Ferrox, Fera-Flow, Feralun, Bronzalun, Alumalun. Send for your copy.

**AMERICAN ABRASIVE Safety Floorings**

AMERICAN ABRASIVE METALS CO. • IRVINGTON II, N. J.

## Industrial Health

—From page 40

ties with fixed retirement age is that a man does not age as a single unit and one must consider various kinds of age. The chronological age or age in years is the customary manner of specification. It tells relatively little, however, about the actual abilities of the men at any age since his abilities depend upon his anatomical, physiological and psychological age much more than they do upon his chronological age. His actual abilities are a function of the physiological efficiency of his various body systems and of the efficiency with which his mind and emotions function to a much greater extent than they are of his chronological age.

The anatomical and physiological changes which involve aging are proceeding at very much different rates in different individuals as well as at considerably different rates in different organs of the same individual. This is the reason that one man at age 60 may be just as efficient and just as capable of carrying on a good day's work as another at age 45.

A study of accident frequencies in one company shows that the group from 40 to 80 composed just under half of the employees and had just over half of the accidents but that the insurance costs for the accidents in this group were 72 per cent of the total insurance costs while insurance costs for the group below 40 were only 28 per cent. This illustrates what has been well known for a long time, that an injury to an elderly person is apt to be much more serious than the same injury to a younger individual.

In another company with about the same proportion of elderly employees and with equally hazardous work the records show no particular increase of expense of injuries over the older age groups. The difference between the two companies is that the first has a laissez faire attitude toward their older employees while the second has a program of proper placement and of accident prevention



to keep them in occupations which match their capabilities. This requires both medical and psychological counseling and a well-designed safety program. No program can alter the fact that an injury to an elderly person is apt to be more severe and the time for healing greatly prolonged as compared to the same injury to a younger person. The problem with the elderly is strictly to prevent the injuries occurring.

The other problem in the industrial employment of the elderly individual is the control of the chronic diseases which normally affect the older group in the population more severely than the younger group.

A great deal of this work can be done by the more complete and more careful use of the knowledge and skills already possessed by medical people. A major part of the program here is for the industry to adopt the philosophy of preventing these diseases.

Some phases of the chronic disease problem also require a considerably greater amount of research and investigation than they have had in the past.

One of the major requirements is that whatever program is set in motion it must be individualized. One cannot handle an aging group as a group because of the difference between chronological age and physiological age. A man of 45 with severe diabetes, for instance, requires considerably different placement and a considerably different program of health maintenance than does a man of 70 with no severe organic lesions.

It may be necessary in a good many instances to subdivide jobs for the older workers in order to accommodate the normal slowing down and reduced strength of the elderly. Such programs are now being introduced into industry in many places and some companies have even set up special units to take care of the needs of the group over 65 years old.

Other industries are sponsoring research on the problems of the aging population such as the long-range program on cardiovascular diseases set up by the Cadillac Division of General Motors Corp. Projects such as this should be

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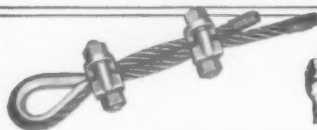
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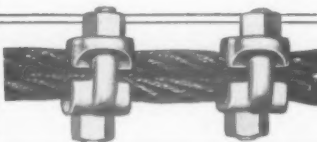
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Laughlin "Fist-Grip" Clips safely secure rope on all 4 sides.



Crimping action of U-bolt leads to early breakage, costly replacement.



"Fist-Grip" Clips with all-around grip keep rope smooth — deliver maximum rope strength.

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**SAFER** — four-bearing-surfaces do not crush or weaken rope.

**STRONGER** — bolts integral part of saddle. Complete unit drop-forged.

**SAVES MONEY** — costs less per installation in most popular sizes.

**SIMPLER** — can't be put on backwards.

**SURER** — two clips do the work of three U-bolts.

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supported by industry as much as is possible and the results should be made available for all industry.

## Health Services in British Industries

*The Industrial Health Service in Britain, by Herbert Tracey. The Trades and Labor Congress Journal, Volume 30, No. 7, July, 1951, page 8.*

The Committee of Inquiry appointed by the British Prime Minister to examine the relationship between industrial health services and the general medical services for the population points up the important contribution of these services to labor efficiency and increased productivity. The report states that they are also an important element in promoting and maintaining good morale in the industry.

In the United Kingdom there are about 230 physicians on full-time work in factories and about 1,500 giving 12 hours or more a week to industrial work. There are about 4,000 nurses on the medical staffs of industrial organizations.

The British have had a medical factory inspection department since 1898 and there are now 15 medical inspectors of factories in the Labor Ministry. They have approximately 1,800 "appointed factory doctors" who do annual physical examinations of all employed young persons and periodical physical examinations of adults in certain specified occupations as well as advising on protective measures against industrial diseases.

The committee report now recommends that a new permanent advisory counsel of doctors, nurses, workers, and employers should be set up to act as a link between the National Health Service, the Public Health Services and the Industrial Health Services. The overlapping responsibilities of the Labor Department, the National Health Services, the local health services, and the National Medical Services need someone to straighten them out.

Patient: "Will I know anything when I come out of the ether?"

Doctor: "Well, that's expecting an awful lot from an anesthetic."

## Emotions Can Be Killers

—From page 29

for you, but, to prevent accidents from these people, one ought to keep them on the jump, to keep them from having time to go wool-gathering. Action and a chance to dramatize themselves will keep their attention on the job and permit that excellent inventiveness which is typical of all dreamers to work productively. Only through lack of attention are they accident-prone.

3. *The chronic worriers* form another group which shows the two accident characteristics of lack of proper coordination and lack of sharp attention. They anticipate accidents, and, by that mental lineup, set their muscles and their attention so definitely on a coming misfortune that they often encourage it rather than send it away. The back-seat driver is a homely example. At every tight place he contorts his muscles, shrieks in dismay, and makes some involuntary move to take over control of the machine; some day he will anticipate an accident by creating one himself.

The worrier also suffers in retrospect; he loses his nerve. Past narrow escapes upset him so much that he has a tendency to duplicate the situation and to provide a more dramatic conclusion.

These worriers should be drilled to a set routine wherever possible; when an emergency comes, habit will then take care and calm the worrier. The worrier is always relieved by certainties. What he cannot stand, and what makes him accident-prone, is the possibility of something unpleasant happening to him; quite often he is a good soldier when he knows what he has to face.

4. *The crippled-personality* is another accident-prone person who eludes detection except by the trained eye. He is the person suffering from any disease or deficiency—heart ailments, deafness, gout, chest conditions, endocrine insufficiency, or others. These people make a mental compensation to fit their physical ailments. They are separated, in their own minds, from the average employees; their illness is a basic factor in all they

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### WILL ONE OF YOUR MEN BE NEXT?

Every hour, falling accidents kill or disable 37 workmen!\*

Are you sure your men are safe from unsafe footing?

You can give your workmen maximum protection against costly slipping and falling accidents with A. W. ALGRIP Abrasive Rolled Steel Floor Plate. ALGRIP is made by rolling tough abrasive grain as an integral part of the upper portion of steel floor plate. Wet or dry ALGRIP gives non-slip protection even on steep inclines. Wear only exposes new abrasive particles so maintenance is not required.

Engineers, architects, purchasing agents, and safety engineers are specifying A. W. ALGRIP for thousands of industrial and commercial applications. Follow their lead. Get more information now. Write for booklet **B-13**.

**THERE'S NEVER A SLIP ON A.W. ALGRIP!**

Magnification shows even distribution of abrasive grain in A.W. ALGRIP.

Even on steep inclines A.W. ALGRIP IS NON-SLIP!

## A.W. ALGRIP ABRASIVE ROLLED STEEL FLOOR PLATE

ALAN WOOD STEEL COMPANY

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125 Years of Iron and Steel Making Experience

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\*17% of the 222 occupational injuries which occur every hour are due to falls. Source: National Safety Council's 1949 edition of Accident Facts.

# Don't give FIRE a FREE HAND!



## Install "AKBAR" The famous KINNEAR Rolling Fire Door

Why take chances with your property when you can protect it from the greedy fingers of fire by installing Akbar Steel Rolling Doors?

Akbar Doors provide quick, positive, automatic protection when fire threatens. They stop dangerous flame-spreading drafts by blocking openings with a steel curtain. Yet, their automatic closing action provides for the safety of building occupants.

In emergency release, the doors are pushed down by a strong starting spring. The downward speed is controlled, as a safety measure for anyone passing under the doors as they are closing.

Another device stops the door at sill level *even if the sill is burned away*. This insures the closing of the doorway. Because the counter-

balance and starting springs are separate units, the doors can be opened after automatic closure, for emergency exits.

When not in use, Akbar Doors remain coiled overhead, out of the way. Approved and labeled by Underwriters' Laboratories, Inc., they have saved as much as one-third of their cost per year in reduced insurance rates. They are built to size for each specific opening, for either old or new buildings.

Akbar Doors can also be used for regular daily service, with manual, mechanical, or motor operation. Where maximum fire protection is not required, Kinnear Steel Rolling Service Doors (non-labeled) are available. Write today for catalog or information on doors for your requirements.

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in  
DOORWAYS

# KINNEAR

ROLLING DOORS

think or do. A vagueness clouds their actions, and, in many instances, the defect which would not rule them out of performing their jobs is turned into an obsession which will. Alertness and normal reactions vanish, and the accident occurs.

Medical treatment and out-in-the-open discussion will be a corrective, and, in time, the crippled-personality will become, as no doubt you have often observed, moderately proud of his ailment. But, then, we would rather have a human bore than a human accident.

5. *The lonely personality* is a much more diffuse case of inattention. The lonely man tends to become dissociated from his work and his fellow employees; he lives in a somewhat bitter world of his own making, and views even his job from the other side of an emotional Grand Canyon. The source and cause of his loneliness rests, almost always, in his private life. It may be a geographical factor; a childhood spent in the open plains with their long, empty vistas, or in the separateness of big mountains will often leave the grown man reluctant to enter the spirit of a big organization. Poverty, again, may leave scars upon the adult personality. Membership in the minor religious sects sets a man apart, and, sometimes, the memory or the presence of pathological parents prevents the grown man from realizing himself in his work.

Whatever the cause of the loneliness, two types emerge: those who linger at the edge of the crowd wistfully hoping some one will invite them to join in; and the others who have an admixture of melancholia in their loneliness and *will not join*.

The second group only needs attention here; these will become schizoid and dangerous, from a safety viewpoint, unless some well-thought-out program is conducted to win them to an inclusion in the life of the organization. They react well to this type of responsibility.

6. *The paranoid personality* is a suspicious fellow who reads dark motives and fell plans into the simplest of actions. He trusts no

one and suspects every one; thus he brings an element of unreality into the normal functioning of the industrial organization, and thus violates the basic rules of accident prevention.

These people must, at all costs, be removed from supervising positions, for they breed resentment and unreality, thus endangering not only themselves but all those under their direct command. He lacks any decent objectivity and visits his family, social, and religious irritations upon his fellow workers.

These are the types, then, which show most clearly the primary equipment for an accident. They are lacking in clear emotional and physical action, an alien element obtrudes itself upon their good sense, and their physical reactions suffer. Of course, I am well aware that the mere recognition of these types among the employees is only the first step toward safety measures, but that first step and the sympathy it involves are of great importance. Once the problem is clarified, the solution becomes humanly possible.

#### Dangerous Situations

So far we have been discussing types of personalities, but there are also situations which give rise to our two requirements for an accident—inattention and lack of coordination. One must always remember that an unusual situation or an irritating dilemma gives rise to emotional stress, and, under emotional stress, the average personality becomes abstracted and loses coordination among mind, body and the job.

Some of these situations are:

1. Physiological fatigue arising from under-nourishment.
2. Mental fatigue arising from long periods of concentrated work.
3. Financial difficulties take a toll of the worker's coordination and attention.
4. Employees quite often attempt to carry on their jobs while suffering from temporary shock. A death in the family, a broken engagement, a fire, or what not, may put a man into a temporary daze. Wherever possible, the supervisor should see that the employee does not work at all while in this condition. The few days of inaction will pay dividends in increased efficiency and freedom from accident.

This group of situations can

## Dry Cleaning natural gas with...



HORIZONTAL TYPE

LARGE VERTICAL TYPE

SMALL VERTICAL TYPE

**AEROTEC**

### GAS SCRUBBERS

*eliminates*

### filtering problems

Aerotec Gas Scrubbers use a highly efficient dry cleaning process to remove all entrained liquids and dust from natural gas. No oils or other liquid filtering mediums are required. Aerotec eliminates the normal difficulties experienced with conventional types.

Aerotec Gas Scrubbers are available in both horizontal and vertical types. The horizontal unit is easily installed in a pipeline. A precipitating tube assembly removes foreign liquid and solids from the gas. The Scrubber has a continuous discharge feature. Vertical units are particularly applicable where dust is the principal material to be removed.

Proved up to 99.9% efficient, Aerotec Gas Scrubbers are used in many of the major pipelines and at numerous wells and gas distributing points throughout the country. There is practically no limit to their size and capacity. For example, one installation in the Big Inch Pipeline of the Texas Eastern Transmission Company has as many as five units manifolded to give a capacity up to 500,000,000 SCFD.

Call or write for technical data and engineering assistance in applying Aerotec Gas Scrubbers to your specific needs.

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# The RIGHT fire equipment for every hazard

It's a good idea to check up regularly on your fire protection. And a good man to help you is your Pyrene\* jobber. He's sure to recommend the right extinguishers for your hazards —because Pyrene makes extinguishers for every hazard!

\*T.M. Reg. U.S. Pat. Off.



#### CARTRIDGE-OPERATED

Superstrong, and handsome, too! New stainless steel shell—new low price. No annual recharging; no dangerous acid to fuss with. Standard protection against wood, paper, textile hazards. 2½ gal. size.



#### VAPORIZING LIQUID

World's best all-purpose extinguishers. Safe on electrical fires, effective on flammable liquid fires. 1 qt., 1½ qt. (at left) pump types; 2 qt., 1 gal. pressure types.

#### AIR FOAM

Couple playpipe to hose line. 19 gals. of water and 1 gal. of Pyrene Foam Compound yield 200 gals. of foam. For flammable liquid fires and ordinary combustibles. Also air foam systems.



#### CHEMICAL FOAM

2½ gal. size produces about 22 gals. of fast-acting foam. Ideal for flammable liquid or ordinary combustible hazards. Also 10 gal. and 40 gal. (illustrated) wheeled units, and systems.

There's a PYRENE for every fire hazard



**PYRENE MANUFACTURING COMPANY**

583 Belmont Ave.

Newark 8, New Jersey

Affiliated with C-O-Two Fire Equipment Co.

usually be met quite easily, but the second set is more difficult to treat. These we shall only enumerate:

The problem of beginnings.

The problem of endings.

The menopause, both male and female.

The problem of group exhilaration.

These, then, are many of the sources, as I see them, of accidents arising from emotional factors. Any measures that contribute to the smooth-handling of emotional situations contribute markedly to safety. Absence of fatigue and ease of mind are great protections against accidents.

I would like to re-emphasize the necessity of keeping in mind the whole unified picture of the individual worker. The industrial is only a part; back of it rests the mental life, the family pressures, the local environment, the social class, and the currents of our total civilization.

Safety, again, as I see it is a sign of positive coordination, a sweetness of physical and mental health, the adaptation of a twentieth-century adult to his industrial environment. It is extremely important to remember that all of his environment must be considered, for man lives, breathes, and works as a unit. Safety is a humane consideration and a grace accruing to a really decent civilization.

#### AGC Trophy Winner

The Burrell Construction & Supply Company of New Kensington, Pa., has received a plaque commemorating the winning of the 1950 Swenson Trophy awarded by Associated General Contractors of America, Inc., each year for the outstanding record in accident prevention. This plaque is a permanent symbol retained by the winner of the Trophy which passes-yearly to each successful contestant. Thurman C. Tejan, executive secretary of the Constructors Association of Western Pennsylvania, presented the plaque to Charles H. Booth, Jr., vice-president of the Burrell Company.

The only man who never knows disappointment is the man who is always looking for trouble.

## Production Bonuses

—From page 66

vice to prevent the hands from entering the danger zone. Productive improvement in this job measured 22 per cent.

A third example involves an 11 per cent improvement on a piercing operation of a round part approximately 12 inches in diameter. The part had previously been fed by tweezers. The die was revised to permit hand feed without entering the danger zone and the addition of a pull-out device to prevent the hands from entering the danger zone.

2. In many instances productive efficiency has been increased because the method used was hazardous, and this hazard required a change in method to eliminate it. Incident to this, the change proved to be more efficient.

For example, an operation on a Nickols hand mill required a fixture improvement to increase the distance of the operator's hands from a nip point. As a result productive efficiency improved 36 per cent.

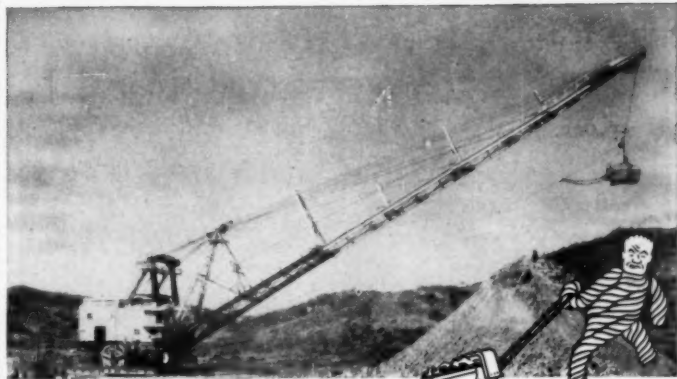
Another example involves a drill press operation and the devising of a jig for a counter-sinking operation. Previously parts were held by hand. Improvement in production amounted to 86 per cent.

On another drill press operation involving a fixture and method improvement, a 92 per cent increase in efficiency was established.

3. There are instances where there is no change in productive efficiency, but a hazard was eliminated through a method change or the application of a safety device. In this category it is reasonable to assume that because a hazard was eliminated, reduction in actual accidents and the possibility of accidents has been brought about. This would indirectly increase productive efficiency.

For example, on a small punch press operation hand feed was changed to tweezer feed, and because of the size and positioning of the part, no change occurred in production.

Another illustration is where



# Tuffy

## Magic Word for Moving Mountains



Making mountains disappear is no trick when your earth moving machinery is equipped with super-strong, super-flexible Tuffy Draglines or Tuffy Scraper Rope. Many more yards of material, many more hours of service are built into the special construction of these Tuffy special purpose ropes—and into Tuffy Slings, Tuffy Chokers and the other members of the famous Union Wire Tuffy Family.

Nor is there any trick to ordering Tuffy—the name alone plus the type, length and diameter needed is all that's necessary. No more complicated wire rope specifications to bother with—just use the magic word TUFFY for the ultimate low cost in wire rope. Write or say it to your Union Wire Rope Distributor (see listing in phone book yellow section) or write us.

### UNION WIRE ROPE CORPORATION

2224 Manchester Ave.

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Specialists in Wire Rope, Braided Wire Fabric and High Carbon Wire.



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## This shop is covered against accidents with **ZORBALL!**

The most frequent shop accidents are fires and falls resulting from waste oils and other liquids. The most widely accepted method of preventing these accidents is Zorball, Wyandotte's all-purpose floor absorbent.

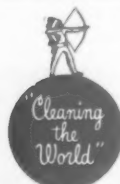
By simply spreading Zorball over oily areas, you get sure protection from slippery floors. By test, Zorball is shown to be far superior than other absorbents on the market today. Here's why:

### WYANDOTTE **ZORBALL** THE SAFEST ALL-PURPOSE FLOOR ABSORBENT

- Always retains original form, even when saturated
- Provides anti-slip surface immediately
- Is chemically inert
- Reduces fire hazards
- Does not track or "mud"
- Safe on skin, fabric, wood, metal or rubber

Call your Wyandotte Representative today and ask him for the quick "desk-top" demonstration of Zorball. He'll show you how quick and thorough Zorball is.

**P. S.** If you have a cleaning problem, write us for free technical information and service.



**THE WYANDOTTE LINE** — products for burnishing and burring, vat, electro, steam gun, washing machine and emulsion cleaning, paint stripping, acid pickling, related surface treatments and spray-booth compounds. An all-purpose floor absorbent: Zorball. In fact, specialized products for every cleaning need.



**Wyandotte CHEMICALS**  
REG. U. S. PAT. OFF.

WYANDOTTE, MICHIGAN • Service Representatives in 88 Cities

tweezer feed was added plus incorporation of air ejection, and no change in productive efficiency occurred.

4. In this category we should include all instances in which the old method employed was hazardous and a job change was necessary to eliminate the hazard, and the job change proved to be less efficient.

For example, on a punch press operation involving piercing and extruding of a piece approximately 10 x 1 inch, the part was previously hand fed with pull-out device. Because the hands entered the danger zone and projections on the die made a pull-out device hazardous, tweezers were added. A 16 per cent loss in efficiency resulted.

Another illustration involves a power press assembly and flattening operation on a part approximately 12 x 2 inches. The projections on the die required a change from a pull-out device only to the use of pull-out and tweezers. This change involved a 28 per cent loss in productive efficiency.

In categories 3 and 4, it can be generally stated, and substantiated by studies, that the number of cases that will fall into these categories are sometimes great only because sufficient study has not been made to produce a method change which would give a higher efficiency. Frequency and quantity of production often determine the amount of time available for further study to produce higher efficiency. Examples in categories 1 and 2 are cases in point. Frequency and quantity of run dictated sufficient time for study to produce the improved efficiency.

Most important of all, however, in the latter two categories is the fact that the hazardous method or condition prompted the change because it was recognizable that injury could occur and that if injury did occur, the immediate loss would be many times the loss in productive efficiency.

Power press operations have been used principally in this discussion because detailed data could be readily compiled to illustrate the points. Drill press and milling machine operations were covered to show that other

conditions would have similar results. Collectively, the examples illustrate that no broad percentage statement can be applied to individual operations and to use one illustration individually would only by chance be the rule.

Approximately five years ago our company's power press program was critically reviewed from the safety viewpoint. In the intervening five years many methods and safety devices were tested.

The standards manager and the power press foreman have stated that it is their considered opinion that safety-motivated changes effected during this five-year period have shown an average productive efficiency improvement of better than 20 per cent.

All the instances of production increase or decrease cited are attributable mainly to the addition of a safety device or a method change. There is also the large number of cases where a change in working conditions brought about by reasons of safety also affects productive efficiency.

A case that might be considered the rule rather than the exception would be the use of an abrasive floor covering in an area where it is impossible to keep oil from the floor. The main purpose of applying the abrasive covering is to eliminate serious falls. The improvement here cannot be measured on the basis of factual data. Without doubt, however, the operator on an abrasive type floor covering is more sure of his footing, proceeds with his job with greater confidence, and suffers less fatigue. Similar cases would be the installation of barrier guards around spot welders where there is the possibility of sparks flying; use of chip shields where air is used to clean off parts eliminates the possibility of chips flying into the face or eyes of an adjacent operator; and good housekeeping to eliminate stumbling and tripping hazards.

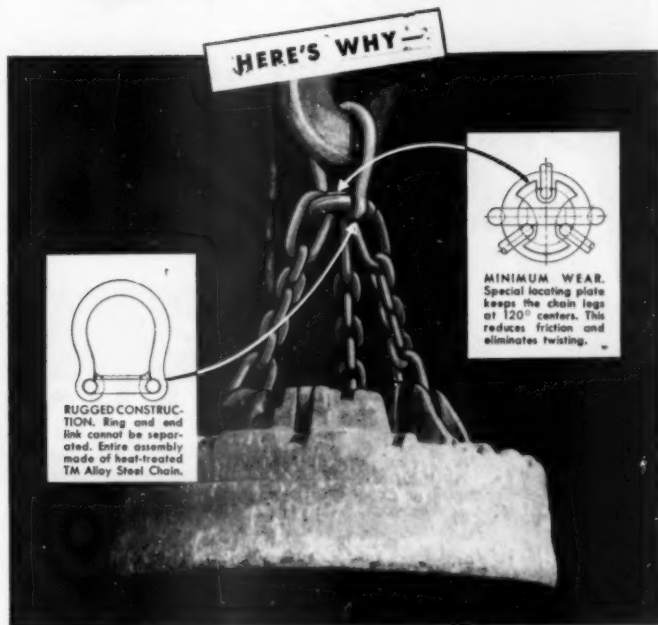
Recognition of hazards on any job and a sound engineering approach to their elimination will always cause an improvement in productive efficiency, either directly by actually producing a greater quantity of parts or indirectly by avoiding accidents.



*Alloy Steel Downtown*

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**DO MORE WORK, LAST LONGER,  
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## Illuminating Engineering Society Elections

The Illuminating Engineering Society has announced the election of new officers to take office October 1, 1951.

Samuel G. Hibben, newly elected President, has been associated with Westinghouse Electric Corp. for over 30 years and since 1933 as Director of Applied Lighting. His life work has been a constant search for new kinds of light and new applications of light. A Fellow of the Illuminating Engineering Society, Mr. Hibben was a Director of the Society 1945-1948, and has just completed a two-year term as Vice-President. During his years of Society membership Mr. Hibben has served on practically every Society committee, in recent years including, Research Coordinating, National Technical Conference, Lighting Progress, Project Planning, Historical, Technical Committee Forum, Local Activities, and Lighting Study Projects in Public Buildings and Private Institutions.

Other officers elected are Vice-President A.H. Manwaring, Philadelphia Electrical & Mfg. Co., Philadelphia; Treasurer R. F. Hartenstein, Ohio Edison Co., Akron, Ohio; General Secretary C. C. Keller, Holophane Co., Inc., New York; Directors G. W. Beals, The Miller Co., Meriden, Connecticut and J. S. Schuchert, Duquesne Light Company, Pittsburgh, Pa.

Continuing in the second year of his two-year term is Vice-President E. M. Strong, Cornell University, Ithaca, New York.

Regional Vice-Presidents starting two-year terms October 1, 1951 are: Canadian Region—F. P. Labey, Northern Electric Co., Ltd., Montreal, Quebec; East Central Region—Paul H. Hildebrand, Pennsylvania Power & Light Co., Allentown, Pa.; Southern Region—R. Cecil Paslay, Louisiana Power & Light Co., New Orleans, La.; Southwestern Region—W. E. Folsom, Dallas Power & Light Co., Dallas, Texas.

The only thing we know about the future is that there will be a lot of it.



## COMING EVENTS

*In the Field of Safety*

### Sept. 6-7, York Harbor, Me.

Twenty-fourth Annual Maine Safety Conference. Arthur F. Minchin, director, Industrial Safety Division, Department of Labor and Industry, Augusta, Me.

### Sept. 17-18, Kansas City, Mo.

Gas Industry Safety Conference, American Gas Association. (Hotel Phillips). H. Carl Wolf, Managing Director, AGA, 420 Lexington Ave., New York 17, N. Y.

### Sept. 18-20, Cleveland

Ohio State Safety Conference (Hotel Carter). Carl L. Smith, executive vice-president, Ohio State Safety Council, 2073 E. 9th St., Cleveland 15.

### Oct. 8-12, Chicago

Thirty-ninth National Safety Congress and Exposition. (Stevens Hotel). R. L. Forney, general secretary, National Safety Council, 425 N. Michigan Ave., Chicago 11.

### Oct. 29-Nov. 2, San Francisco

American Public Health Assn., 79th Annual Meeting. Dr. Reginald M. Atwater, executive secretary, APHA, 1790 Broadway, New York.

### Nov. 2, Cincinnati

First Annual Greater Cincinnati Safety Conference. (Netherland Plaza Hotel). Kenneth R. Miller, coordinator, Greater Cincinnati Safety Council, 1203 Federal Reserve Bank Bldg., 4th & Race Sts., Cincinnati.

### Dec. 3-4, Baton Rouge, La.

Louisiana Safety Association, Annual Conference. (Louisiana State University). Charles E. Doerler, secretary, P. O. Box 806, Shreveport, La.

### Jan. 21-24, Houston, Tex.

American Roadbuilders Association, Annual Meeting. Eugene Reyhold, executive vice-president, International Building, Washington 4, D. C.

### Apr. 1-4, New York

Twenty-second Annual Convention, Greater New York Safety Council. (Hotel Statler). Paul F. Stricker, executive vice-president, 60 E. 42nd St., New York 17, N. Y.

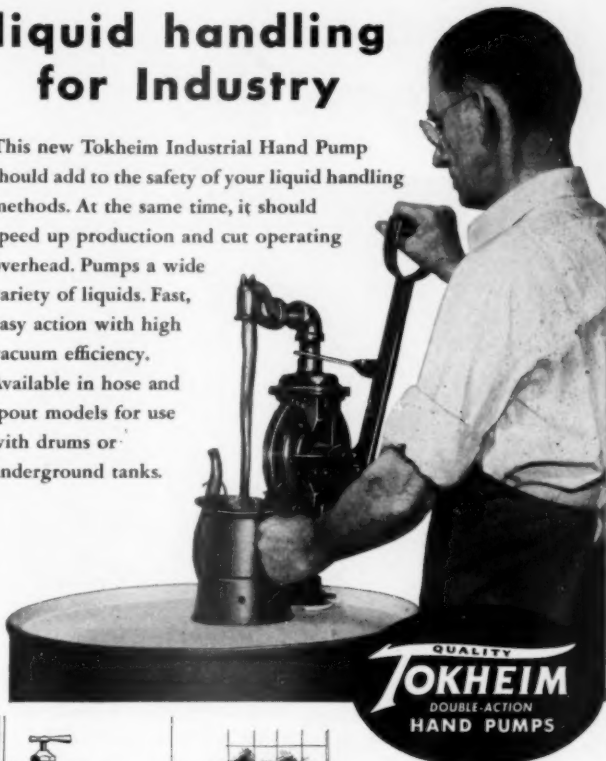
### May 8-9, Baltimore, Md.

Statewide Safety-Health Conference and Exhibit. (Lord Baltimore Hotel). Joseph A. Haller, director of safety, State Industrial Accident Commission, Equitable Bldg., Baltimore 2, Md.

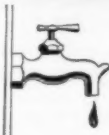
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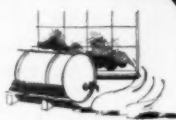
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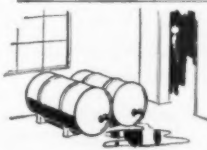
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Special nozzle attachment eliminates dripping.



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"You can't look glamorous in goggles."

With this rallying cry, the girls in a munitions plant during the war refused, point-blank, to wear safety glasses during grinding operations.

And nothing the plant management could do was successful in getting them to change their minds. Finally, the Aetna safety engineer was called.

He studied the problem, smiled a little and left.

The next morning he was back. Picking out the girl who was the leader of the anti-goggles brigade, he called her over and held out his clenched right hand.

"Here's something you'll be needing soon," he said. The girl looked at what he dropped in her palm. A glass eye, blue to match her own! That's when she fainted. But from then on, everyone wore their goggles.

Skilled technical service, effective public educational aids together with the ingenuity to solve new problems and the ability to punch home a safety lesson—that's what you get when Aetna Loss Prevention Service works for safety in your plant.

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FIRE AND MARINE

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## Venezuelans Learn Fast

—From page 23

section was placed in the industrial relations department, but because the majority of its work directly affected the production department, it was transferred within three months and has since reported directly to the production manager. The over-all frequency rate at that time averaged 120, the rate in the drilling section sometimes reaching 450.

The first steps were the setting up of injury reporting and recording systems so that the major factors involved in our accident experience could be analyzed. At the same time, the management made it clear that line supervisors were responsible for accident prevention and that the necessary steps must be taken to reduce the accident rate.

In line with this policy, a safety committee was organized in each division. Every section head was appointed a member and the division manager was asked to be the chairman. These committees, with the assistance of the safety and training section, review all accidents, discuss and recommend corrective action on safety problems, plan safety activities and evaluate results.

To deal as expeditiously as possible with the training of employees in safe practices, workers in groups of fifteen, were required to attend safety meetings every six weeks. Many of the National Safety Council films were translated and recorded in Spanish for use in these sessions. Safety graphs in Spanish were also found to be very effective.

The safety posters and literature available from the National Safety Council could not be used because of the language problem. At first it was necessary to prepare and print our own posters and this in addition to the time and cost involved in translating and re-narrating films made the use of visual aids extremely costly. Many other companies were up against the same problems and so it was decided to pool these activities through the formation of an inter oil company safety committee.

The results have been more than satisfactory. Twice each month, over 2000 copies of the committee's poster designs are distributed throughout the industry. Several 16mm movies and 35mm sound slide films are being prepared in Spanish and the committee is now undertaking its first locally produced sound slide film, directed at one of industry's major problems—good housekeeping.

As another means of getting safety information across to the workers, Socony-Vacuum undertook the publication of a 16-page monthly safety magazine. Realizing that printing costs were only a small part of the total expenditure on a publication, it was decided to display the materials as effectively as possible. At least four colors appear on the back and front covers. The art work is the best obtainable and the finest paper is used. This same policy was applied when we published our illustrated safety handbook, explaining the basic safe practices required of all workers.

Concurrently with the development of the safety program, several training programs were undertaken that had a direct effect on our accident experience. For example, one of our best Venezuelan drillers was made an instructor and for nearly three years has been giving drilling crews on-the-job instruction in more efficient methods.

Automotive mechanics, in small groups, have been receiving classroom instruction two hours per day from one of our most competent Venezuelan garage foremen, who spent six months in the U. S. A. studying automotive training methods. An American driver training instructor has been testing and training every employee required to drive a company vehicle, and the division safety and training supervisor has set up a continuous program of elementary instruction on the use of fire extinguishers for all employees and advanced instruction for the volunteer fire brigades.

Special courses in Spanish, based on techniques developed for the United States armed forces, were given to expatriate supervisors so that they could commu-

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are dangerous and inefficient. Make clean glasses a habit in your plant and office by making it easy for your people to keep their glasses clean. Install Sight Saver Cleaning Stations. It will pay you to supply Sight Savers, the Dow Corning Silicone treated tissues with a world-wide reputation for being the best and the easiest way to clean, polish and protect eyeglasses and safety goggles. Let Sight Savers wipe away the best excuse men give for failing to wear safety glasses. Implement your eye safety program with Sight Saver Cleaning Stations.

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*Available* from the leading  
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No. 60 Black Dispenser . . \$2.50

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No. 65 Refill Packet  
containing 800 sheets . . \$1.45



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Made from asbestos, flame-proofed duck and jean cloth, fiberglass, leather and wool.

*The best grade basic materials, painstakingly designed . . . for safety with comfort, and long wear, earned the WHEELER reputation of "MORE SAFETY PER DOLLAR."*

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nicate with their workers more effectively.

While all of these activities had a desirable effect on the accident rate, it was obvious that to have a safety record comparable with U. S. standards, we would have to go a step further and provide special incentives. One of the reasons for this conclusion was that, unlike U. S. legislation, the law in Venezuela provides for full pay and medical care from the commencement of the disability period.

The incentive plan was divided so that there would be a worker's and a supervisor's program. Workers were offered awards for periods of one, two, three and more consecutive years without a lost time injury. The awards consist of cigarette lighters, alarm clocks, automatic pencils, etc., and are presented with a certificate by the supervisor, in front of the entire employee group.

A quarterly competition is conducted in which all operating sections compete. A total of 400 points are assigned for reduction of accident rate, good housekeeping, safe practices, and safe physical or mechanical conditions. A rotating committee of judges inspects every section twice per quarter looking for unsafe practices, unsafe conditions and poor housekeeping.

Points are deducted for such conditions, and at the end of each quarter, the supervisor, foremen and caporales of the section having the most points receive awards such as pen and pencil sets, eight day traveling clocks and silver cigarette cases. These are presented by the division manager, in the presence of all employees of the section and at the same time a National Safety Council plaque is given to the section head to be placed in a prominent position during the current quarter.

As a further means of integrating safety with line functions, the safety and training director is on the production department staff at the head office in Caracas. Through attendance at daily and monthly staff meetings, he is in a position to assist management in insuring that safety and fire protection are taken into considera-

tion when making long range plans and day to day decisions.

What have been the results of our safety program? To ensure that there is no question about the accuracy of our figures, we have data on industrial injuries passed from the medical section to the comptroller's department as a double check on the safety and training section's records.

From an average frequency rate of approximately 120 in 1948, the current figure is now 18.70. Compared with United States standards, our present rate is not high when the fact is taken into consideration that a large part of our operations is drilling (U.S. average 51.44).

Our experience and that of many other companies in foreign operations, should help to counteract the rather widely held opinion that industrial accident prevention in countries with comparatively little industrial background is a tough problem. We think that our safety record is one of countless examples that show how much can be achieved by industry in a country that was agricultural little more than a quarter century ago.

## The President's Medal

*Awards made by the National Safety  
Council for resuscitation by the Prone  
Pressure Method*

VICTOR EMERSON, stock foreman, Phillips Petroleum Co., Spokane, Wash.—gas asphyxiation.

HOMER K. GRAVES, electrical engineer II, Tennessee Valley Authority, Johnson City, Tenn.—electrical shock. Certificate of Assistance to HOWARD W. ELLER.

HARRY E. LYBARGER, pipeliner, Sinclair Pipe Line Co., Blackwell, Okla.—suspended respiration due to exhaustion.

LEON RIDAUGHT, lineman, Clay Electric Cooperative, Keystone Heights, Fla.—electric shock.

EARL SHIPMAN, line foreman, Carroll Electric Cooperative Corp., Berryville, Ark.—electric shock.



## STOP INDUSTRIAL DERMATITIS!

**Now... a simple  
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**DID YOU KNOW** that skin affection is the cause of 65% of all industrial health ailments? Medical research has recently revealed this amazing fact, and has proved that most of this infection results from bacteria on the skin. You can check this cause of industrial absenteeism quickly and economically by using Powdered Germa-Medica with Hexachlorophene (G-11). This powerful new hand soap stops much skin infection and many communicable diseases at the source by drastically reducing the germ-causing bacteria on the skin. Try it. Protect the health of your workers and realize important new savings through reduced absenteeism.



### NEW MEDICATED POWDERED SOAP

*Powdered Germa-Medica is used like any ordinary powdered soap, yet it gets the germs as well as the dirt. Economical—write for free sample.*

**HUNTINGTON LABORATORIES, INC. • HUNTINGTON, INDIANA • TORONTO**



**Powdered Germa-Medica**

WITH HEXACHLOROPHENE (G-11)

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## USE BERYLCO BERYLLIUM COPPER TOOLS

There is no simpler, better, cheaper prevention against the dangers of fire and explosion than Berylco Safety Tools. They effectively reduce the danger of sparks in the presence of inflammable liquids, gases and dusts. They are nonmagnetic and noncorrosive. They resist heavy impact and, when properly handled, provide long service life. They are, of course, made of high performance beryllium copper. Sold through jobbers the country over. Write for the name of the one nearest you.

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### UNIVERSAL GAS MASK

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#### A DAVIS MASK FOR EVERY PROTECTION NEED!

Davis has a complete line of gas masks, each specifically designed to afford maximum protection under

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close hopper bottom car doors with latch-type locks? Do you use dangerous, old-fashioned hand, foot and bar methods?

You're taking a chance on ruptures, strained backs and smashed fingers. Play safe. Use the Prescott Safety Tool.

Write today for free folder.

**The Trumbull Mfg. Co.**  
WARREN, OHIO

### Obituary

—From page 62

the general manager at Albany, special representative for the transportation department, assistant trainmaster on the Saratoga Division, trainmaster of the Pennsylvania Division and assistant superintendent of the Pennsylvania Division.

Mr. Clune is a veteran of both World Wars. In World War I he served in the infantry and the Corps of Engineers. He operated light railways in France and after the Armistice was superintendent of terminals on French railways operated by the Army engineers. He received a commendation for this service.

In World War II he volunteered for duty and was commissioned a lieutenant colonel in the transportation corps. He was port transportation officer in Boston and was flown to Europe on a special mission.

Colonel Clune participated in the Normandy invasion and was placed in charge of several railways in Northern France. He next was appointed a member of the Supreme Headquarters Liberation Mission to Belgium as liaison officer between the American Army and the Belgian government. He was cited for meritorious service.

He became disabled in Belgium and was returned to the U.S.A. He was separated from the army July 27, 1945, and assumed duties as assistant superintendent of safety for the D & H. He became superintendent of safety early in 1950.

#### GEORGE E. BERGSTROM

GEORGE E. BERGSTROM, safety engineer at the U. S. Naval Ordnance Plant, Forest Park, Ill., died July 10 at his home in Riverside, Ill.

Mr. Bergstrom was born in Chicago, July 7, 1895. He was a member of the American Society of Safety Engineers and had been engaged in safety work with industrial concerns and insurance companies for 30 years.

The secret of triumph is all in the first syllable.

## Tuning In Accident Experience

—From page 26

half the frequency of the Electric Utility Industry (12.23), instead of being nearly double it as indicated by the annual frequency of Chart No. 1 (22.31).

Nevertheless a change from .90 to 5.22 was definitely a product of conditions. What happened in 1945 in District C after such a record? Five accidents in seven months, including one fatality! The explanation of this situation gets into another story that is too long to detail at this time. That is the problem of why accidents come in bunches.

We find that the period ending in 1946, with a valid frequency of 4.59, is an improvement over the period ending the previous year, but that it is far from the perfection indicated by the annual frequency of zero shown in Chart No. 1.

Yes, a careful and detailed study

of the methods of accident experience comparison represented by these two charts, not only confirms the casual opinion of converting chaos to order, but we find that the method used in Chart No. 2 provides a more reliable record, and one full of helpful suggestions for future action.

The method shown in Chart No. 2 was used for over two years. It was found that the detailed analysis of the changes it recorded were very enlightening and helpful in planning accident prevention work. While this method of accident experience comparison and analysis is mathematically sound and statistically correct; and in spite of its improved reliability in portraying past events; and even though its study and interpretation bring to light many helpful suggestions for improvement and future action; it is lacking in one respect:

It is not quite sensitive enough to changed conditions, in that the million man-hour period, as of the

year ending, in some cases, does not reflect the result of changed conditions until months after they have occurred.

Our search for some means of satisfying this deficiency without losing the advantages of this method, led us to the *moving million man-hour period ending each month*. In other words, comparison and analysis on the basis of the last million man-hours worked, as of the end of each month.

The calendar time period required to complete the exposure of a million man-hour period is a variable of some effect, but is unimportant by comparison to the necessity for analyzing like periods in respect to all being in excess of a million hours.

On first thought it would seem that the calendar time period was a variable that should be given considerable weight, for it is obvious that it is not entirely equitable to compare 12 months' operation, to say, three or four years' operation. Whatever inequity there may be would seem to operate in



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Ideal for light-duty jobs, Gold Medal Junior Scaffolds put men at work level faster — in perfect safety.

Easy to transport, quickly rigged — Gold Medal Juniors avoid many of the inconveniences common to rope tackle.

Steel wire rope — which resists chemicals, dampness and abrasion — replaces dangerous block and falls.

Positive locks eliminate danger of faulty hitches. All working parts are always available for servicing.

Approved by Underwriters' Laboratories, Inc.

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Used by hundreds of builders the country over. Write for illustrated Bulletin J-6 and see how Gold Medal Junior Scaffolds can help you.

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Gra-Lite gives you protection that is unequalled in the safety garment field . . . protection covering a wider range of chemical hazards . . . protection that you can test because you want *proof!* We'll send sample swatches of Gra-Lite for investigation—or for your convenience our laboratory is open for consultations—all without obligation.

This new fabric is tough—Gra-Lite compound thoroughly penetrates the fibers of the base fabric providing resistance even on the *inner surface of the material*—for this reason it withstands the cleaning agents used in launderings and has great resistance to mildew and rot. Abrasion resistance?—just test a sample swatch!

With worker comfort in mind Gra-Lite was designed more than 40% lighter than ordinary impervious fabrics—12 standard sizes are offered in coveralls, and with new design features workers are assured of the best fit and freedom of movement.

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favor of the larger district and the shorter time period.

While this is true to some extent, on an analysis of the 17 districts of the Southern Division (where the moving million man-hour period ending each month varies the calendar time period from 12 to 54 months) we find that in District D, shown in Table II, although it is necessary to work 54 months to exceed the million hours, they either held first place, or tied for first place on this basis, for each month of the entire year of 1950.

Consequently our method of accident experience comparison and analysis has evolved into one in which the time period in months and years has been allowed to vary so that the total man-hour exposure of each unit being compared or analyzed exceeds 1,000,000 hours, but is as close to a million hours as is practical.

In other words, our basis of comparison and analysis is that of the last million man-hours worked, as of the end of each month.

This method of studying the accident experience of our districts has been very helpful to us, especially since none of the districts in our company works a statistically valid number of hours even in a year, to say nothing of monthly. In fact, District A requires 35 months, District B 36 months and District C 38 months to complete a million man-hour period. On a system-wide basis the spread is from 12 to 54 months, with three new districts yet to establish a comparable exposure period.

The main advantages of using the last million man-hours worked for comparison and analysis purposes are:

1. It permits valid and just comparisons and analyses of small units of operations. It also permits just comparisons of large and small operating units, on an equal basis.
2. It also permits each unit to analyze its own experience with the assurance that changes and trends indicated are caused by conditions and circumstances not obscured by chance occurrences (allowing for standing deviation) or statistical inaccuracies of the use of the comparison formula.
3. Consequently, they may be assured that they are not searching for non-existing causes, and that if they search hard enough, and long enough, the underlying causes of the changes recorded

will be discovered, can be corrected, and future similar accidents prevented.

4. All corrective action or preventive work must be at the point of work; i.e., on a district as opposed to an overall company basis. But unless analysis of such data is valid and justly comparable, it is useless.

Chart 3 and Tables I and II are made on the basis of the number of disabling injuries in the last million man-hours worked, ending each month. They are self-explanatory to the extent that they illustrate the application of this method in graph and table form.

They are hardly self-explanatory in the sense of interpretation, for we are continually getting new and additional benefits from them in the light of changing conditions.

Confucius was right. Tuning in accident experience is very productive when accurately tuned.

## The Old Maestro

—From page 37

callous boob. And after Lou had tried everything else to make him do something about safety, he called in the boob for a special meeting with three of the higher ranking brass. Lou did a lush-up act that made the department boss feel he was a hot-shot and that he'd better do something to live up to the build-up. He never did recover from that praise—and pretty soon he almost justified it.

After lunch Lou and I hid out in safety equipment stockroom, perched on a couple of cartons. My secretary had instructions to leave us alone, except to run in fresh coffee every hour.

I can't, in this small space, do more than summarize what he said between 1:30 and 5:00 this afternoon. I don't suppose I'll remember it all, ever, at one time. But what he said is the kind of thing that will come up, in relation to appropriate situations, all my life.

Here's the summary, in brief:

Lou says I run a pretty good "book" safety program. By that he means that the elements the authorities say should be in a safety program are present. He even says that the elements are handled with competence and some efficiency.

But—and it was the discussion

Jackson Gas Welding Headrest Goggles W-50

## 8 oz. of Prevention



First, in making these goggles, came *Safety*: protection against injurious light rays from front and sides . . . and against flying particles; easy adjustment for proper fit, in goggles and in headrest.

*Comfort* came next. Properly adjusted, they bear gently against the face. Weight is evenly distributed about the head. One hand, a few seconds, and they are raised or lowered. Lightness too makes for comfort. At eight ounces, these headrest goggles are the lightest of their kind on the market.

For Gas Welding, Cutting and Brazing, with lenses in F.S. shades 3 thru 6; types W-50, LTB-50 and BX with headrest, type WR-50 with elastic band.

For Chipping and Grinding, with clear, hardened lenses: type G-50 with headrest, type GR-50 with elastic band.

For Flash Welding and Metal Pouring, with visors in light, medium and dark green, .020" thick, 4", 6", and 8" deep: type J-1 shield with headrest, type C shield with elastic band in back.

For Resistance Welding, Metal Finishing, Woodworking, etc., with visors of clear plastic .020", .030", and .040" thick, 4", 6", and 8" deep: type J-1 shield with headrest, type C shield with elastic band in back.

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WARREN • MICHIGAN

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## 127.64% SALES GAIN

For Cal-flor-dry in last 18 months, our records show these hard-to-believe figures. We hesitate to advertise them, but after all, increased demand is the best product endorsement we know. New users are added weekly. Old users repeat regularly. They find Cal-flor-dry does a better job of absorbing "Casual" oil and grease, and does it for less money than any other product.

Ask Your Jobber Salesman—  
or Write Direct.

## The FLOR-DRY Company



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The right lock  
for this job is a



**Personal-Safety  
Padlock**



**Model  
No. P65R**



There is no risk of a "forgotten man" when each boiler cleaner, electrical repairman, etc. locks out the valve or switch with his own Corbin Personal-Safety Padlock.

Corbin No. P65R Padlocks are made especially for this purpose. They have a solid die cast case. The height of the shackle opening is 2 3/4 inches. The disc tumbler mechanism has 200 possible key changes. If desired, they can be keyed alike or master-keyed. A metal tag for employee's name or number is securely attached to the hardened-steel shackle.

We will gladly help you work out a Personal-Safety system based on your specific needs. For further information, without obligation, write to:



**CORBIN CABINET LOCK Division**  
The American Hardware Corporation  
New Britain, Conn.

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QUALITY LEATHERS

**LICHTMAN**  
J.L.&S.  
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**For Best Results  
INSIST ON  
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LEATHER  
For Protective Clothing**

of the *but* that really took time—he believes that I am in danger of believing that the "book" answers are enough.

Specifically, I want to be too much the safety *engineer*, not enough the safety *man*. I put too much faith in inspection, investigation, mechanical correction, not enough in the possibilities of working on men's hearts.

I protested that point. After all, my *Diary* is full of examples of my concern with men's welfare. I've tried to mobilize social service facilities to straighten out men whose personal problems interfered with safe work. I've been conscious of the need of a sound use of psychological technique in persuading various types of people to various types of conduct. I've done my share of visiting guys in hospital, of talking with families. I've worked hard learning to remember names, and I seem not to arouse dislike among those I meet.

I said all that and a good deal more to Lou Hill. And his response is fixed enough in my mind that I think I can quote it almost word for word:

"You," he said, "are proving my point. I said you ran a good 'book' program. I said you were too much the engineer. Now you sew up my case tight. You admit that psychology and social service are part of the 'book' program and you are trying to play them. But you're playing them like an engineer."

"The book says, use psychology. So you study up on psychology and psychology says do such and such, so you do it—with all the love and fervor of a designer determining wind stress. And when your psychology doesn't work, all you think is that your calculations were wrong, so you recalculate and try again."

"Sure, usually, sooner or later, you blunder into something that's psychologically right. But if you'd forgotten you were an engineer and the guy you were working on was a cog to be repaired, you'd have reached out for his heart, and you'd have known him as a man, and you'd have had insight that is broader and bigger than all the book psychology."



"And you're an engineer in social service. A guy's in trouble. So, by all means look up the handbook and get the specifications for a social service team to deal with him. Get a social worker; get a doctor; get a visiting nurse; add two parts of minister to a triple strength psychiatric counseling session and, behold, we will reduce the guy's accident potential by 36.2 per cent.

"But a man with love in his heart doesn't fall for this guff. He isn't concerned with the book, or organizing teams. He just wants to help people, and helping them he wins their love. And because he is a man, a good man, people want to go along with him. And even when he is not competent, even when he is not efficient, he and his smile in the shop is a reminder that safety is bigger than any book, bigger even than the spilled blood and pain it tries to prevent.

"Safety becomes something guys want because the good man says it is good. And they cover him, anticipate his needs, help him, guide him. Yes, they guide him—the little guys in the shop and the fat stuffs in the panelled offices. They admire and respect him because of what he is as a man, not because he read a few books on safety and works hard.

"The stuff in the books is good. The program you're following is a good skeleton on which to build. But you can't keep warm, living flesh on the skeleton *unless the heart inside it beats.*"

There was more—a lot more. But he had knocked the defenses out from in front of me. I didn't protest any more. I took it.

After supper tonight, Sue and I and the baby stood saying goodbye to Lou in my driveway. Just before he got in the seat of his car, he took Sue's hands, and said,

"Gal, I've just kicked your man's teeth in. But you remember, because he's in no shape to remember anything now, that the best thing I know about him is that he picked a gal like you. I'm not going to tell you what I said to him or what I think he needs, because you know him better than I do.

"What you are to him is not

## How To Provide More Washing Facilities In Less Space

### Use BRADLEY WASHFOUNTAINS



Bradley Washfountains serve 8 to 10 persons simultaneously, save space and water, require but one set of piping connections (hot water, cold, and drain) for each of the group fixtures.

A central sprayhead eliminates need for faucets, and automatic foot-control turns water on or off. When washers leave, water flow is cut off.

Bowl is self-draining, and there are no collections of dirty water.

Catalog D-713 shows how to arrange washrooms for maximum capacity, economies, and sanitation in minimum space. Write for a copy today—no obligation. **BRADLEY WASHFOUNTAIN CO.**, 2237 W. Michigan St., Milwaukee 1, Wisconsin.



Above: Typical installation of Bradley Washfountains showing the 54" full-circle model.

Right: Close-up view of Bradley in use illustrating even distribution of properly tempered water to one to ten persons simultaneously.

## BRADLEY washfountains

Distributed Through Plumbing Wholesalers



**SAFETY  
PRODUCTS  
for  
INDUSTRY**



**Safety Goggles**

**Welding Helmets**

**Safety Spectacles**

**Protective Clothing**

Write for NEW Catalog •

**GLENDAL OPTICAL CO., Inc.**

232 Liberty Ave.

Brooklyn 7, N. Y.



just what he needs. It will, someday, teach him what he must be to others if he is to become a really good safety man."

He drove off—going half a block. Then he parked, ran back with the little legs moving fast.

He said, "Don't think I remembered to say, that he'll do. He's pretty bad, but he's got possibilities."

And he ran back to his car and drove away, leaving the three of us standing waving on the lawn.

### Acoustical Research Program Announced

An extensive research program to determine the uses, proper testing and properties of acoustical materials was announced recently by Wallace Waterfall, executive secretary of the Acoustical Materials Association. According to Mr. Waterfall, research projects are now under way at three different research centers in the country and these projects now constitute about 30 per cent of the

Association's current activities.

At the present time a three year research program is being sponsored at the Armour Research Foundation, Chicago, to determine more accurate means of measuring the sound absorptivity of acoustical materials. Arrangements also have been completed to set up test equipment for obtaining fire resistance and light reflection data on all products produced by members of the Association.

A fellowship has been maintained for several years at the Acoustics Laboratory of Massachusetts Institute of Technology by AMA. From this work have come a number of important contributions to the technical literature on acoustics.

At Factory Mutual Laboratories in Boston, safety tests are in progress which are intended to furnish data needed to help determine the relationship between safety and flame spread or combustibility of several interior finish materials.

The primary purpose of the Association, according to Mr. Waterfall, is to establish procedure whereby architects and others may be supplied with reliable data on the acoustical efficiency and other physical properties of architectural acoustical materials.

The membership of the Association is comprised of leading manufacturers of acoustical materials in the United States who manufacture products of drilled or fissured tile made from mineral or vegetable fibres or granules, perforated metal, drilled cement asbestos sheets.

### Floors That Show Dirt

If you want the utmost in floor cleanliness, don't pick a color that doesn't show the dirt; choose one that will show up everything.

That's what *Modern Industry* says, citing the example of Standard Railway Equipment Company, Hammond, Ind., which is installing black tile floors in locker, shower and lunch rooms. Janitors will have to work hard to keep them from showing even a minimum of dirt.

There's something to that, even though illuminating engineers wouldn't give them a high rating for light reflection.



**Famous Du Pont  
PRO-TEK helps  
prevent time loss**

**PROTECT YOUR WORKERS'** hands with Du Pont PRO-TEK, the hand cream that acts like an invisible work glove. When rubbed on the hands and arms before starting work, it guards the skin against paint, grime and insoluble cutting oils. And it's easily washed off with water when the job is done . . . takes all the grime with it.

Order Du Pont PRO-TEK today. Or write E. I. du Pont de Nemours & Co. (Inc.), Wilmington 98, Delaware.



## ASKED and ANSWERED

Assistance with problems of accident prevention and industrial health is offered by National Safety Council. All inquiries are answered by mail and a few topics are selected for publication.

### Grounding TV Antennas

**Question:** We sell and install television receivers and would like some information concerning lightning danger from television antennas.

At present, when the antenna mast is installed on the house, it is grounded with No. 8 wire connected to the bottom of the mast with a firm connection and the wire is run down the roof to a six foot copper ground rod, where it is fastened with a clamp. The top of the ground rod is buried about a foot below the surface of the ground. An approved lightning arrester is used between the lead-in and the base of the mast.

In cases where the house has a sewer vent we have grounded the mast to the vent. Is this a good practice?

**Answer:** All antenna ground wires should be as straight as possible, void of bends and kinks, and the ground rod itself should be driven into the earth where the ground has good conductance. One location for the ground rod would be a low or wet spot.

Through the proper installation of television antennas on roofs you are offering the same kind of protection to homes and roofs that lightning rods offer.

The use of steel towers either on top of the roof or along the side of the building is not recommended, because they are quite high and their safety depends on proper anchoring and guying to prevent them from blowing down and falling across power lines. Also the steel tower does not offer any better ground than the grounding circuit that you have installed at the present time. In fact, it may be necessary to make extra good bonding conditions on the legs of the steel tower, since you cannot

## Sure! Maintenance Men are HARD TO GET...



### That's why I depend on HILLYARD MAINTAINER SERVICE

Why "buck" the problem when you can relax with easy-going Hillyard Floor Care. Simplified Hillyard Care substitutes "know-how" for brawn... easier methods save man hours of work... specialized chemical products perform with "behind-the-ears" thoroughness... when I need help—Hillyard sends along a trained floor expert to lend a hand on the job... his straight-from-the-shoulder advice doesn't cost me a cent.

#### YOU CAN'T BEAT SERVICE LIKE THAT

any day in the week—particularly NOW when good maintenance men are so hard to find.

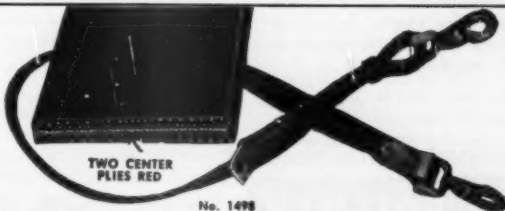
- ★ Talk over your maintenance program with a Hillyard Maintainer today. Get the benefit of his years of specialized experience. Learn the Hillyard way to maximum maintenance with a minimum crew... and reduce those costs as much as 50%. Write for Free Hillyard Help.



"on your staff  
not your payroll!"



HILLYARD CHEMICAL CO.  
ST. JOSEPH, MISSOURI  
Dept. U-9  
Branches in Principal Cities



TWO CENTER  
PLIES RED

No. 1498

### NEW! BUHRKE NYLON SAFETY STRAP—ULTRA FLEXIBLE

Light weight, SAFE, uniform flexibility—even at -28° F.—strap remains soft and pliable; in 2 styles, No. 1838 with slide buckle, and No. 1498 (above) with tongue buckle. Made of NYLON FABRIC, 1 1/2" wide, 8 ply. Full cross section breaking strength over 3,000 lbs., buckle hole strength over 600 lbs. SAFE to use until RED PLY appears. Complete controlled fabrication of strap in our plant. Write...

R. H. BUHRKE CO., 4701 W. Grand Avenue, Chicago 39, Illinois

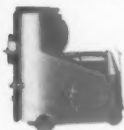
a little dust  
or a  
**LOT**  
**HOFFMAN**  
*has the right kind and size of*  
**VACUUM  
CLEANING  
EQUIPMENT**  
*to remove your hazard*

Put your dust problem up to Hoffman. Our engineers have helped every type of industry to eliminate dust hazards, including abrasive toxic and explosive types. The complete line of Hoffman vacuum cleaning equipment is built for heavy-duty industrial service . . . higher suction, greater capacity . . . available with T.E.F.C. Class I and Class II motors for hazardous locations. Write for Free Survey and descriptive bulletins.



*portables*

**HoffcoVac 15**  
operates 35-foot  
length of hose



**HoffcoVac 30**  
operates 50-foot  
length of hose

Also, HoffcoVac 50 and 75 for use with longer hose lengths, on heavier dust accumulations. PLUS Gasoline-Engine Powered Model.

Hoffman also builds Multi-stage Centrifugal Blowers and Exhausters, for air or gas, in a wide range of capacities, PRESSURES and VACUUM.

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MACHINERY CORPORATION

AIR APPLIANCE DIVISION

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CANADIAN PLANT, NEWMARKET, ONT.

rely on the weight of the tower to make ground connections at the base.

Grounding to a sewer or vent pipe is not recommended because most vent pipes are cemented to ceramic tile or field tile in the ground which breaks the positive ground circuit. You have to have a good ground connection from the top of the vent pipe down to where the joint is cemented to ceramic tile, but then you rely on an earth ground.

If the soil pipe or vent pipe were iron or steel and were continuous running into the field in wet areas, you would have nothing to worry about. It is also possible that a collection of gases from vegetation or sewer gas might collect in the traps of the vent pipe and a poor ground or an insulated joint might cause an arc which would set off this ignition and cause a gas explosion or fire.

#### Diesel Exhaust

**Question:** Sand for our switcher locomotives is applied by gravity from spout through hatch openings in the roof of locomotives at both ends.

It is necessary for employees to be on the roof of the locomotive during this operation and they have complained that gases from the exhaust stack have affected breathing.

Can you offer any suggestions for solving this problem?

**Answer:** The United States Bureau of Mines some years ago made a series of studies of the components of Diesel engine exhaust gases in connection with the operation of small Diesel locomotives in mines and tunnels. The locomotives used in these tests were so arranged that the exhaust gases were diluted with air from the radiator fans before being discharged to the atmosphere. Under these circumstances, it was found that if adequate ventilation was provided in the mine or tunnel, the amount of carbon monoxide and other harmful gases released into the atmosphere was not sufficient to be dangerous to other workers. However, even this depends on the engine operating at proper efficiency. If the fuel mixture is too rich, the production of

carbon monoxide increases very considerably.

Furthermore, assuming that the exhaust from your Diesel locomotives is released into the atmosphere undiluted, it is quite likely that the percentage of carbon monoxide and other harmful gases would be above the safe limit. When the wind is in the right direction, we can assume that your workers up on the top of the locomotive will at times be completely surrounded by undiluted exhaust gas, and it would not be safe to assume that under these circumstances they were not in a position of some hazard.

In addition to carbon monoxide the exhaust gas would contain oxides of nitrogen and considerable amounts of carbon dioxide. Nitric oxide breathed into the lungs will dissolve in the moisture present there and form nitric and nitrous acid.

In addition, the exhaust gases will contain noticeable amounts of aldehydes, which are largely responsible for the unpleasant odor and the irritating qualities of the exhaust. If the Diesel fuel oil used contains sulphur, the exhaust will contain oxides of the sulphur, which are also extremely irritating. There is also a possibility that with an over-rich mixture, hydrogen and methane will be produced.

The maximum allowable concentration of carbon monoxide in air for continuous exposure is considered to be 100 parts per 1,000,000 (0.01 per cent). If the concentration of carbon monoxide rises to 10,000 parts in 1,000,000 parts of air (1.0 per cent), death is likely to follow within a few minutes.

Perhaps providing your workers with universal gas masks (type N) would solve your problem.

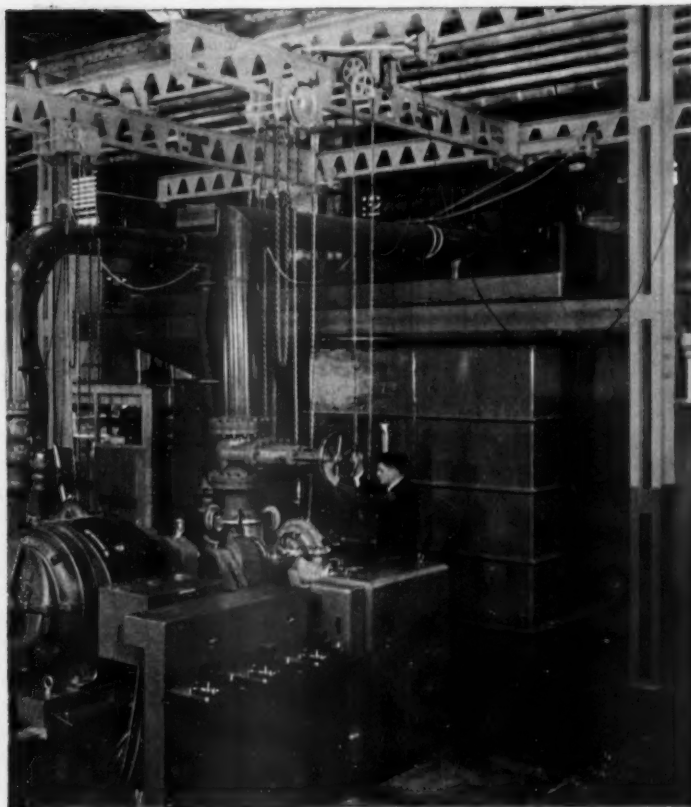
It would seem that the alternatives might be to provide a movable ventilating stack that could be lowered over the exhaust vents of the locomotives during the sanding operation, or to shut off the engines during the operation.

Another big advantage in doing nothing is that one doesn't have to get up early to do it.



# Pittsburgh COLOR DYNAMICS

is used by  
**Allis-Chalmers**  
to make  
**Pump-Testing**  
**More Efficient**



**One of the world's largest makers of power machinery scientifically utilizes energy in color to make working conditions safer and more pleasant**

THE many ways in which workers and management alike benefit by the use of Pittsburgh COLOR DYNAMICS are again demonstrated in the pump test department of the Allis-Chalmers Manufacturing Company, of Milwaukee, Wis. This organization is one of the world's greatest producers of agricultural, industrial and electrical power machinery.

● Allis-Chalmers' satisfactory experiences with COLOR DYNAMICS is best summarized in this comment by Carl E. Meyer, manager of the Department of Buildings and Properties:

● "Our pump test floor is just one example of how Allis-Chalmers is making use of the energy in color in various of its plant areas to help promote greater efficiency as well as to make working conditions better and safer. With focal and eye-rest colors

on walls we believe that we have lessened eye strain for employees who are almost continuously engaged in reading automatic recording instruments. We have also used morale-building colors in various areas to provide more attractive surroundings that improve the worker's attitude toward his task.

● "We have marked accurately all control and hazard areas in order to lessen the danger of accidents. We have also used a distinctive set of color markings on containers that hold hazardous materials as well as pipe-markings to distinguish carriers of various kinds of liquids.

● "As a result of this painting, workers take greater pride in their surroundings. They keep their working areas cleaner, thus simplifying housekeeping problems."

● Why not try COLOR DYNAMICS in your plant—on a machine or two, or in one department—and see the difference it makes?

**Here's How You Can Get A Color Engineering Study—FREE!**

● For a complete analysis of Pittsburgh COLOR DYNAMICS and how it works, write for a FREE copy of our booklet explaining this painting system. Or better still, ask us to make a scientific color engineering study of your plant for you free and without obligation. There's a trained color expert at each of our 75 warehouses. Call your nearest Pittsburgh Plate Glass Company branch and arrange to have a representative see you at your convenience. Or mail the coupon below.

**Mail this coupon for FREE BOOKLET!**

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Department NS-91, Pittsburgh 22, Pa.

☐ Please send me a FREE copy of your new revised and colored Booklet, "Color Dynamics In Industry."

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PITTSBURGH PLATE GLASS COMPANY



# SAFETY

# POSTERS

## IMPORTANT

**A**LL miniatures shown on these pages are of **NEW** posters — produced for the first time this month. Excepting the Jumbo poster (below, left) all will be available during the remainder of 1951. Those displayed on the following pages in

black and white are actually printed in two or more colors. We suggest you refer to this copy of the News in making monthly selections.

In addition to these new posters, you will find a great variety of subjects among the 744 posters illustrated in the 1951 Directory of Occupational Posters, and which will also be in stock throughout 1951. For a proven plan of selecting your posters objectively, refer to pages 4 and 5 in the Directory—a copy of which has been sent to all National Safety Council members. Additional copies are available at 50 cents each—write Membership Dept., N.S.C.



9409-C

25x38

Above new "C" poster, issued monthly, is indicative of the other two color posters—shown in black and white on the following pages and in the 1951 Poster Directory.



JUMBO POSTER for OCTOBER 1951

The Jumbo poster, issued monthly, is designed for outdoor use and is available to members on annual subscription but is not stocked. Its actual size is 9' 11" by 11' 8".

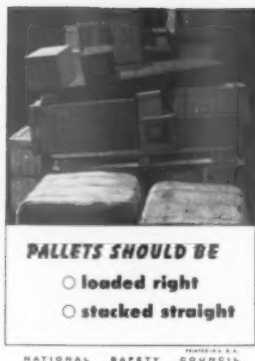


NATIONAL SAFETY COUNCIL  
9339-A 8 1/2 x 11 1/2

This new four color poster is illustrative of the 72 four color posters shown in the 1951 Poster Directory.

Electrotypes of poster miniatures on this page are not available, nor can payroll inserts be supplied.

Posters below are printed in two or more colors  
(Available only in sizes indicated)



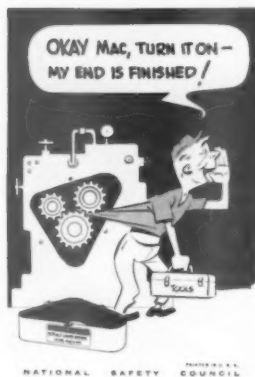
9400-A 8½x11½



9161-A 8½x11½



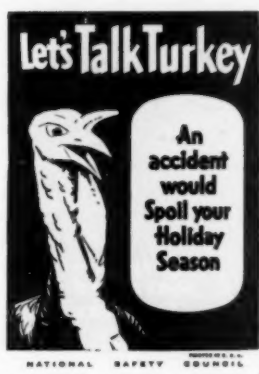
9398-A 8½x11½



9305-A 8½x11½



9360-B 17x23



9373-A 8½x11½



9396-A 8½x11½



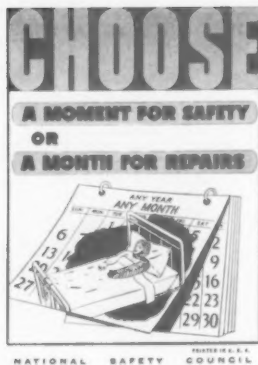
9401-A 8½x11½



9387-A 8½x11½

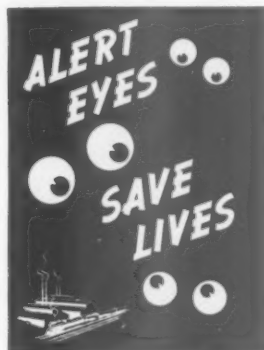
Electrotypes or payroll inserts can be furnished on all poster illustrations shown above.

Posters below are printed in two or more colors  
(Available only in sizes indicated)



9379-B

17x23



9358-B

17x23



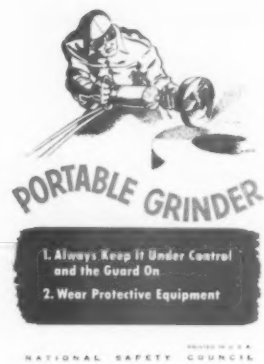
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8½x11½



9357-A

8½x11½



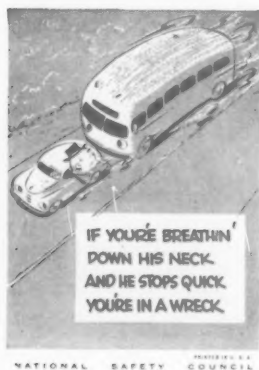
9368-A

8½x11½



T-9350-B

17x23



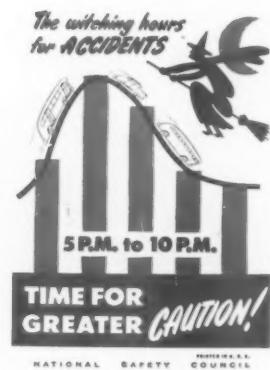
V-9392-A

8½x11½



V-9393-A

8½x11½



V-9391-B

17x23

Electrotypes or payroll inserts can be furnished on all poster illustrations shown above.



### "Save Your Own Skin"

Safetygraph No. 21, *Save Your Own Skin*, is the latest in this series of visual aids for use in training employees. It is concerned with the problem of occupational dermatitis. Illustrated for the most part with cartoons, the safetygraph reduces the subject to simple terms which can easily be understood by employees.

The safetygraph covers the following topics: what dermatitis is and how it is caused, how it can be prevented through use of protective clothing and protective creams and through personal cleanliness, and the importance of seeking medical attention when the first signs of dermatitis appear.

Appropriate places for the leader to discuss the specific materials handled by the workers in his group are clearly indicated, and supplementary information which he will find useful is provided.

Designed as a teaching device, Safetygraph No. 21 is 18 by 24 inches so that all members of a small group can easily see the illustrations while the leader is talking. It is available either alone or in an easel type binder.

Member prices: Safetygraph with binder, 1 to 9 copies, \$14.55 each; 10 to 99, \$13.75 each; 100 or more, \$13.20 each; safetygraph only, 1 to 9 copies, \$11.00 each, 10 to 99, \$10.45 each; 100 or more, \$9.90 each.

### Lifting Booklet

Just off the press, *Heave-Ho* is a brand-new pocket-sized booklet on lifting. Designed to stimulate and maintain interest, as well as to instruct, this 12-page booklet is the most recent addition to the Council's series of such materials for distribution to employees.

A character called Jack-in-the-Box pops up on every page to

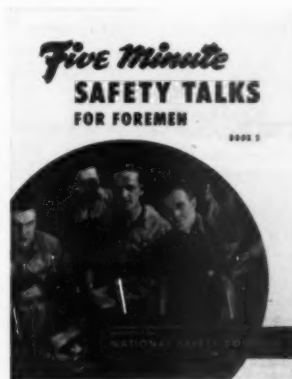
point out unsafe lifting practices which can cause trouble and injury. In each case the right way is clearly and simply explained.

Following the pattern of other booklets in the series, *Heave-Ho* is illustrated with cartoons and printed in two colors. Space for company imprint is provided on the front cover.

Member prices: 1 to 9 copies, 12 cents each; 10 to 99, 7 cents each; 100 to 999, 6 cents each; 1000 to 4999, 4½ cents each. For prices on quantities over 5000 and for a sample copy, write the Council's Membership Department.

### Pamphlets for Distilleries

Three new 8-page pamphlets, copiously illustrated with photographs, have been printed for the distilling industry. The titles are Industrial Safety Series Pamphlet No. F-6, *Distilleries—Grain Handling and Milling*; No. F-7, *Distilleries — Mashing, Fermenting, Distilling and Stillage Drying*; No. F-8, *Distilleries — Warehousing and Bottling*.



Cover of "Five Minute Safety Talks for Foremen," Book 2. This volume of 32 talks on subjects of general industrial interest is a handy source of reference for foremen in planning brief on-the-job safety talks.

Each pamphlet carries a flow chart of the operations concerned and a statement of the principles recommended as the basis for safety programs in distilleries. Specific hazards and unsafe practices are then discussed, and corrective suggestions are made.

The original draft of the pamphlets was prepared by members of the Distillers Safety Directors Group. Subsequent drafts were reviewed and approved by this group and by the Distillers Division of the Food Section, National Safety Council.

Member prices, each pamphlet: 1 to 9 copies, 45 cents each; 10 to 99, 40 cents each; 100 to 999, 35 cents each; 1000 to 4999, 33 cents each.

### "Roof Fall Accidents"

A new publication for the coal mining industry, Engineering Study No. 2, *Roof Fall Accidents*, is now available. This 8-page analysis discusses the principal factors of fatal accidents from falls of roof in coal mines, and suggests methods of eliminating the most common causes. Systematic timbering, as the best way to prevent roof fall accidents, is discussed in detail.

Intended primarily for safety departments and for distribution to supervisors, the study is illustrated with drawings showing the circumstances surrounding thirteen fatal accidents and with three photographs.

Member prices: 1 to 9 copies, 29 cents each; 10 to 99, 24 cents each; 100 to 999, 18 cents each; 1000 to 4999, 14 cents each.

### Carbon Tetrachloride

*Potential Health Hazards in the Use of Carbon Tetrachloride*, an article by H. S. Gibbs, M.D., which appeared in the June 1951 issue of the NATIONAL SAFETY NEWS, is now in stock as Safety Reprint General No. 21. In its four pages the article discusses acute poisoning, chronic poisoning, and decomposition hazards.

Member prices: 1 to 9 copies, 17 cents each; 10 to 99, 13 cents each; 100 to 999, 8 cents each; 1000 to 4999, 7 cents each.



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In these critical days, when "Defense is Everybody's Job" the Payroll Savings Plan is up front with America's defenders. Month after month, in upwards of 21,000 companies, more than 8,000,000 men and women are building a bulwark of thrift dollars. In January, 1951, 3,587,000

\$25 Defense Bonds and 1,028,000 \$50 Defense Bonds were purchased—the majority by serious savers on the Payroll Savings Plan.

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## Safety Library

—From page 52

it is not likely that another description of a complete investigation of an entirely new occupational disease will be found anywhere else in the literature. In this instance we have descriptions of two entirely new diseases from their discovery to the point, at least, of sufficient understanding to permit proper preventive measures to be taken, although we still have no cures.

For the more specialized reader the clinical descriptions, the careful indexing and the complete bibliography make this a valuable book. It should be given at least one reading by anyone interested in industrial health problems.

F. A. Van Atta

### Aeronautics

*Standard Operating Procedures, Aircraft Rescue and Fire Fighting.* Published by National Fire Protection Association, 60 Battery-march Street, Boston 10, Mass.

1951. 25 p. Price 35¢. (NFPA. No. 402)

*Suggested Aircraft Rescue and Fire Fighting Equipment for Airports.* Published by National Fire Protection Association, 60 Battery-march Street, Boston 10, Mass. 1951. 35 p. Price 50¢. (NFPA No. 403)

### Civil Defense

*Civil Defense Supplement to the American Red Cross First Aid Textbook.* Published by the Blak-

iston Company, Philadelphia. 1951. 47 p. Price 10¢.

*How to Prepare Your Plant for Atomic Attack.* Published by Walter Kidde and Company. Department A. 675 Main Street, Belleville 9, N. Y. 1951. 32 p. Free.

*Police Service.* Published by Federal Civil Defense Administration. 1951. 46 p. For sale by the Superintendent of Documents, Washington 25, D. C. Price 20¢. (AG-10-1)

*The Rescue Service.* Published

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by Federal Civil Defense Administration. 1951. 28 p. For sale by Superintendent of Documents, Washington 25, D. C. Price 15¢. (AG-14-1)

#### Dust

*Dust Explosions in Factories: The Protection of Elevator Casings by Pressure Relief Vents.* By K. C. Brown. Published by Technical Information Section, Safety in Mines Research Establishment, Portobello Street, Sheffield, England. 1951. 15 p. Price 10¢.

*A Review of the Present Methods of Testing Industrial Dusts for Inflammability.* By K. C. Brown. Published by Technical Information Section, Safety in Mines Research Establishment, Portobello Street, Sheffield, England. 1951. 15 p. Price 10¢.

#### Electrical Industry

*By the Grace of God Through the Hands of a Fellow Worker.* Published by Edison Electric Institute, 420 Lexington Avenue, New York 17, N. Y. 1951. 28 p. Price

25¢. (Pub. No. 51-8)

#### Fire Protection

*Standards of the NBFU for the Installation of Centrifugal Fire Pumps.* Published by National Board of Fire Underwriters, 85 John Street, New York 38, N. Y. 1951. 62 p. Free. (NBFU. Pamphlet No. 20)

#### Health

*British Medical Journal—Industrial Hazards.* Vol. 7, No. 1-2. 1950. Published by Medical Department—The British Council, 1951. Available from Oxford University Press, 114 Fifth Avenue, New York 11, N. Y. Price \$2.00.

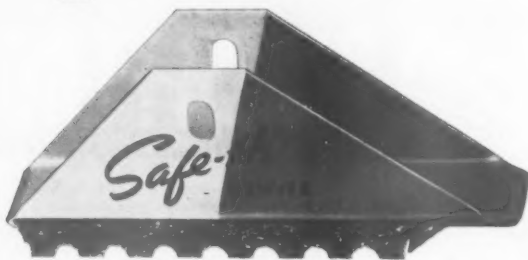
*The Operation of Sickness Benefit Plans in Collective Bargaining.* Published by Industrial Relations Section, Princeton University, Princeton, N. J. 1951. 109 p. Price \$2.50.

#### Hospitals

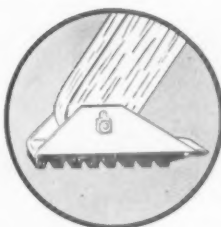
*Surgical Equipment—Special Safety Issue.* July, 1951. Published by Ohio Chemical & Surgical Equipment Co., 1400 East

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#### **Magnesium**

*Standards of the NBFU for the Storage, Handling and Processing of Magnesium.* Published by National Board of Fire Underwriters, 85 John Street, New York 38, N. Y. 1951. 16 p. Free. (NBFU Pamphlet No. 48)

#### **Metal Products**

*Machine Tools and Their Hazards.* Published by U. S. Bureau of Labor Standards, 1951. 34 p. For sale by the Superintendent of Documents, Washington 25, D. C. Price 15¢. (Bulletin No. 129)

*The Operation of Power-Driven Metal-Forming, Punching and Shearing Machines. Occupational Hazards to Young Workers Report No. 8.* Published by U. S. Bureau of Labor Standards, 1951. 37 p. For sale by the Superintendent of Documents, Washington 25, D. C. Price 20¢. (Bulletin No. 139)

#### **Mines**

*Allaying Coal Dust During Operation of Continuous-Mining Machines in Utah.* Published by U. S. Bureau of Mines, 1951. 12 p.

Available from the Bureau Publications Distribution Section, 4800 Forbes Street, Pittsburgh 13, Pa. Free. (Information Circular 7608)

*Safety in Hoisting at the United Verde Mine, Phelps Dodge Corp., Jerome, Ariz.* Published by U. S. Bureau of Mines, 1951. 30 p. Available from the Bureau, Publications Distribution Section, 4800 Forbes Street, Pittsburgh 13, Pa. Free. (Information Circular 7612)

*Ventilating Methods and Safety Measures Used in the Temporary*

*Ventilation of the King Solomon Tunnel, Frisco, Summit County, Col.* Published by U. S. Bureau of Mines, 1951. 15 p. Available from the Bureau, Publications Distribution Section, 4800 Forbes Street, Pittsburgh 13, Pa. Free. (Information Circular 7603)

#### **MAGAZINE ARTICLES**

##### **Beryllium**

*Beryllium Disease from the Ceramic Industry.* By Preston W. Reynolds. (In Archives of Indus-



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trial Hygiene and Occupational Medicine, June 1951. p. 575).

*Case of Chronic Beryllium Poisoning from Atomic Energy Development.* By Robert J. Hasterlik. (In Archives of Industrial Hygiene and Occupational Medicine, June 1951. p. 547).

*Five Cases from the Fluorescent Lamp Industry.* By Edward M. Kline and others. (In Archives of Industrial Hygiene and Occupational Medicine, June, 1951, p. 549).

#### Chemicals

*The Label Must Tell the Story.* By George A. Sherman. (In California Safety News, June 1951. p. 3).

*Norisodine Sulfate (N-Isopropylarlerenol), Toxicity in Industrial Use.* By R. M. Watrous. (In Industrial Medicine and Surgery, June 1951. p. 305).

#### Civil Defense

*Four Case Studies—How to Protect Your Plants.* (In Factory Man-

agement and Maintenance, July 1951. p. 97).

*Utica Atomic Bomb Defense Test Proves Value of Planned Mutual Aid.* (In Fire Engineering, July 1951. p. 500).

#### Commercial Vehicles

*It's the "Little" Things That Count, Now More Than Ever, in a Safety Program.* (In Fleet Owner, July 1951. p. 76).

*The Worcester Way to Safety.* By Robert B. Temple. (In Bus Transportation, July 1951. p. 41).

#### Economics of Safety

*Uninsured Cost of Industrial Accidents.* By Rollin H. Simonda. (In Monthly Labor Review, June 1951. p. 633).

#### Elevators

*Inspect Your Buildings' Transportation.* By Leslie F. Clifford. (In National Engineer, July 1951. p. 16).

#### Engineers—Safety

*Getting the Most Out of Your Safety Engineer.* By Allan L. Cobb. (In Chemical Engineering, July 1951. p. 121).

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SAFE, NON-POISONOUS SKIN TOUGHENING  
TO COUNTERACT THE SOFTENING  
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NEAT, CLEAN  
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IT MAKES THE FEET FEEL FINE

Recent research has upset former theories regarding the control of Athlete's Foot. ONOX is revolutionary. A safe, non-poisonous skin toughener does the work. You may test it under any conditions you choose to impose and without obligation. For example:

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### Sellstrom Offers Glamour Shell-Rim Industrial Glasses With Steel Spring Embedded in Temples

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Order a few sample pairs direct for "on the job" testing and we will then also give you the name of a nearby dealer who can supply you. Prices quoted are for less than dozen lots.

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## A BRIGHT SPOT IN THE SAFETY WORLD

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twisting. Naturally there's no dry rot or splinters.

Louisville ladders will give you EXTRA years of service and can be a major factor in your plant safety program. We invite you to check the list of concerns who purchase our products. You will find us at the Safety Congress.

**LOUISVILLE METAL PRODUCTS CO., 1101 W. OAK ST., LOUISVILLE 10, KY.**



#### Fire Protection

*Sprinklers Make Plants Fire-Safe.* By Dawson Powell and Lt. Col. J. B. Coleman. (In *Power*. June 1951. p. 80).

#### Grinding Wheels

*How Flexibility and Safety Are Combined in Modern Grinding Wheels.* By Robert H. Green. (In *Tool Engineer*. July 1951. p. 40).

#### Health

*Fatigue—A Problem of Accident Prevention.* By T. Ralph Leadbeater. (In *Supervision*. July 1951. p. 20).

*Health Hazards in the Production and Handling of Vanadium Pentoxyde.* By Sven-Gosta Sjöberg. (In *Archives of Industrial Hygiene and Occupational Medicine*. June 1951. p. 631).

*Occupational Tuberculosis in Hospital and Sanatorium Personnel.* By William G. Childress. (In *The Journal of the American Medical Association*. July 28. p. 1188).

*The Specialist Looks at Everyday Medical Care in Industry.* Orthopedics.

By Harvey E. Billig. p. 1179. *Psychiatry*.

By Floyd O. Due. p. 1183. *Cardiology*.

By B. M. Overholt. p. 1186. (In *The Journal of the American Medical Association*. July 28, 1951).

#### Hospitals

*A New Standard for Non-flammable Medical Gas System.* By Roy Hudenburg. (In *Hospitals*. July 1951. p. 40).

#### Management

*Management Interest in Accident Prevention.* (In *Monthly Labor Review*. June 1951. p. 651).

#### Petroleum Industry

*"Make Safety a Habit."* (In *Oil and Gas Journal*. June 28, 1951. p. 69).

#### Power Presses

*Point-of-Operation Guarding of Power Presses.* (In *California Safety News*. June 1951. p. 4).

*What Causes Safety.* By Bert A. Hall. (In *American Machinist*. July 9, 1951).

#### Public Utilities

*Is Life Worth Saving?* By C. E.

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**AMAZING New PLEASANT WAY**  
TO FOOT HEALTH IN SHOWER ROOMS?



Believe it or not . . .

### DEATH VALLEY'S ALKALI FLATS

Reveal the secret of  
Nature's own Method



THE ALKALI FLATS destroy plant life by Salt Action . . . and the Athlete's Foot fungus is plant life.

Everybody would enjoy foot health if we all went barefooted each day on a Salt Flat.

IN THE SAME WAY the mineral salts in non-toxic Foam-X soon restore shoe-softened skin to its original toughness and  
**STOP ATHLETE'S FOOT!**

Bring the Alkali Flats to your shower rooms . . .

"A GODSEND FOR SORE BLISTERED FEET" says a Dallas, Texas user.

TRY IT AND SEE FOR YOURSELF. Pay nothing unless 100% satisfied!

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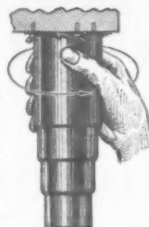
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How many use showers..... SHIPPING DEPOT, HUNTINGTON, INDIANA

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Kohlepp. (In Edison Electric Institute Bulletin, July 1951, p. 238).

#### Railroads

"Grass Roots" Movement Boosts Safety. (In Modern Railroads, June 1951, p. 133).

#### Rope

Wire Rope—So What? By Harold W. Richardson. (In Construction Methods and Equipment, July 1951, p. 94).

### Tree Trimming

—From page 34

their electrical conductivity. Wood ladders which conform to the *American Standard Safety Code for Wood Ladders* (A14—1943) are recommended. Ladder feet should be provided with anti-slip devices such as spikes, ladder shoes, or similar attachments. Some companies use ladders with top rungs made of fabric that will conform to the shape of the tree.

27. *Saws.* Each saw should have a fiber or leather guard with a snap so that the saw can be

held by a ring in the worker's belt on his side while he is working or changing position in the tree.

#### Personal Protective Equipment

28. Proper clothing is important in the prevention of accidents. The workman should not wear loose, floppy clothing, ragged gloves, or worn-out shoes. Safe clothing for regular tree-trimming crews may consist of hightop

leather shoes with composition soles and heels, breeches, a long-sleeved sweat shirt or close-fitting jacket, a cap, and soft leather gauntlet gloves.

29. For spot trimming or short term trimming operations, the workers may wear rubbers in place of composition-soled shoes. If overalls or regular work trousers are worn, the cuffs should be wrapped around the ankles

## Dunking Stations!

ANSWER YOUR PLANT  
SMOKING PROBLEMS



Unit No. 2 for mounting on walls, columns and posts.

Unit No. 1, (not illustrated) same as unit No. 2 but with upright and base for use on floors, aisles, etc.

Send for illustrated folder which gives complete details.

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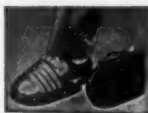
### "SANKEY" IMPROVED FOOT GUARD equipped with Anti Skid TOE CLIP.

"SANKEY" FOOT GUARDS consist essentially of a metal shield to be worn over the shoe whenever the foot is in danger of being either crushed or cut. The metal shield is designed to furnish a maximum amount of protection to the entire front of the foot—not merely the toes alone, but also to the instep against hazards from falling, rolling or flying objects, or from accidental tool blows. Write for literature or a trial pair.

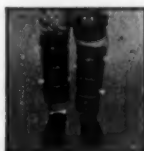
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Combination  
Foot-Shin Guard



Foot Guard Equipped  
With Anti-Skid  
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Shin-Knee Guard

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PROCESSORS  
OF LEATHER  
COTTON AND  
RUBBER GOODS

## YOUR COST DEPENDS ON THREE FACTORS

- ① Using the correct glove for the job.
- ② Proper stock control. A clean pair for a dirty pair.
- ③ Salvaging by proper cleaning, repair.

Wash-Rite specializes in "Rite-to-Wear" gloves for every job. Complete stocks. Immediate shipment. We have assisted many of the country's largest industries in setting up a money saving glove control system. "Wash-Rite" is exclusively engaged in the correct and scientific cleaning, sterilizing, repairing, reshaping and processing of industrial work gloves, aprons and other protective clothing.

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## Wash-Rite Company, Inc.

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## Group of RUEMELIN Fume Collectors Keeps Shop Clear of Welding Fumes

This well ventilated welding department is typical of hundreds of similar installations. Welding operators appreciate smoke and gas-free atmosphere. Thousands in service. Many repeat orders. Collecting fumes at the source with local exhaust hoods has proven most practical in operation. Write for Bulletin 37-D describing all types of Ruemelin Fume Collectors.

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and tied to prevent branches from catching the legs of the workmen. Long-sleeved shirts or jumper coats should be worn for arm protection.

30. Some companies recommend that their workers wear ordinary caps so that the visors will shade their eyes from the sun when they look up into the tree while climbing or trimming. Other companies provide green plastic eye shields or goggles with colored lenses to remove sun glare and to protect workers' eyes from being scratched or struck by small twigs and branches.

31. Rubber protective equipment. Ordinary tree-trimming crews not having qualified linemen should not be provided with rubber protective equipment.

### Practices and Procedures

32. Climbing. Before allowing men to climb into a tree, the supervisor should check the tree for structural weaknesses and should brief the men on the hazards to be expected. He should call their attention to dead limbs and should point out overhead wires and their distance from the main trunk of the tree.

33. The method which the men use to climb into the working area of a tree will be determined by the location and height of the tree, the available equipment, and general company rules.

34. In some metropolitan areas where trees are close to the street or overhang it, workmen use linemen's tower trucks, telescoping towers, or ladders to reach the main supporting limbs from which they can climb into the work area. (See Figure 2.)

35. In some companies and municipalities the men use extension ladders entirely to climb into trees, or trim from them directly. The feet of an extension ladder should be blocked, and the ladder should be tied to the tree or supported by another worker.\* Also, the trimmer should secure himself to the rung of the ladder with his safety strap or safety line.

\* See Safe Practices Pamphlet No. 1, Ladders.

These precautions will prevent the ladder from slipping and the worker from falling because of overreaching, body movement, or movement of the tree itself.

36. For climbing tall trees where the first branches are high and it is difficult or unsafe to use an extension ladder, a climbing rope can be used. Some companies use a rope seat formed by tying a double bowline; others use a special tree trimming saddle belt.

#### RESCUE FROM LIVE WIRE

Act quickly, but keep yourself out of danger.  
Assume the wire is alive.

1. Have someone notify the electric company.
2. Shut off the current at the nearest switch if possible.
3. Use a non-conductor—a dry board or all-wooden tool—to pull the wire from the victim. Do not touch any part of his body with your bare hands.
4. Wear tested rubber gloves, if available.
5. A dry manila or cotton rope may be looped around the wire or the victim to break the contact.
6. Do not let the loose end of the wire touch you.
7. Apply the prone-pressure method of artificial respiration if the victim is unconscious and not breathing.



SAFETY INSTRUCTION CARD No. 189  
National Safety Council PRINTED IN U.S.A.

Figure 7. NSC Safety Instruction Card No. 189.

37. The climber should be cautioned to select a crotch strong enough to carry his weight before he throws a climbing rope into a tree. It should be high enough in the tree that he will come to a safe stopping place if another crotch farther up is to be used as a safety line support.

38. After the rope has been crotched, the worker should tie the rope directly to the D rings of his saddle. Some companies use a heavy spring pressure steel harness snap tied into the rope with a bowline knot. This fixture is snapped into the rings of the body belt.

39. Harness snaps should be made of approved and tested forged steel and have a tongue locking device to prevent their



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coming open from fouled lines. The worker should leave a loose end 24 inches to 36 inches long in which he can make a taut-line hitch around the ground end of the climbing rope.

40. Enough slack should be allowed for the short end of the rope so that the taut-line hitch can be slipped at least arm's length above the head. The long rope is then gripped below the hitch and pulled down with both hands to waist level. Then, while one hand holds the long rope below the taut-line hitch, the other hand slides the hitch above the head again. With the taut-line hitch now holding the man's weight he can raise both hands above his head for a second pull. This operation is repeated until the limb is reached, and the workman then climbs into the tree area.

41. In northern areas where heavy clothing places additional weight on the climber, he should be instructed to sit in his safety belt and rest at intervals. He can hold his weight by snubbing the ground line into the rings of the belt or by using the taut-line hitch.

42. The taut-line hitch should be used unless the workman has a helper to pull him up to the limb. The helper should place himself in such a position that he can readily move to a tree or pole and snub the long rope if the workman wants to rest before he reaches the limb.

43. Once the climber is in the work area, the rope can be recrotched to a higher place in the tree. By adjusting the hitch along the long rope, the workman can change positions and work a considerable distance from the main trunk without danger of breaking the limb or falling from the tree.

44. Some companies that provide linemen's body belts for supporting workmen in trees use a special rope sling with harness snap that can be attached to the D rings of the belt and wrapped around the trunk of the tree or the supporting limb. This type of sling prevents the worker from being drawn tight against the tree if a limb splits and falls. The



standard safety strap is too short to prevent this type of accident.

45. Tree trimming climbers with the proper gaffs should be used only in trees that are to be cut down. In this case damage to the tree and to the bark is not critical. Linemen's climbers should not be used.

46. To return to the ground the worker leaves the tree support sitting in the safety belt and pulls down on the knot with his hand so that the ground line has a straight path and can slip through the knot. The safety sling grows longer as he descends. He can stop at any place by ceasing to pull down on the knot.

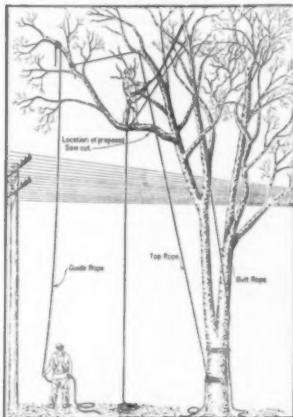


Figure 8. Example of use of guide rope, top rope, and butt rope to remove and lower large lateral limbs.

47. Use of rope.\* Workers should be trained to tie various rope knots and hitches.\*\* They should respect their safety lines and should be instructed not to use them for lowering equipment or limbs. (See Figure 5.)

48. Rope should be kept coiled when not in use. The coil should be carried on the shoulder from one tree to another, so that none of the rope drags on the ground and forms kinks. This method also keeps the rope from getting full of dirt and sharp grit, which cuts the fiber. To open a kink,

\* See Safe Practices Pamphlet No. 6, Fiber Rope.

\*\* See Data Sheet D—Gen. 3, Manila Rope (Safe Loads).

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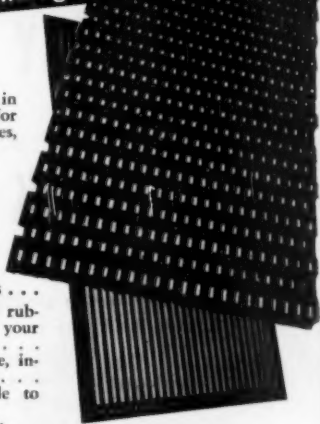
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the rope should be held loosely. Pulling a kink out of a rope damages the fibers.

49. When ropes are run through crotches, over limbs, or against bark, they must be moved slowly to prevent damage from friction burns.

50. For protection against the weather, rope should be covered with a waterproof tarpaulin or placed in a ventilated storage box. Wet rope should not be dried rapidly near a fire or other intense heat. Coils should be hung up, off the floor or ground, so that the air can dry them.

#### TREE-TRIMMING

(Along Electric Power Lines)

**L**INEMEN are exposed to many hazards when clearing trees and branches from the right-of-way. Here are some suggestions:

1. Before cutting a tree or large branch, determine the safest direction in which it can be felled.
2. Use sufficiently heavy bull or tackle lines; place lines in position before cutting is begun.
3. Take note of the direction and intensity of the wind, and the lean and condition of the tree or branch.
4. Use automatic power for anchoring and pulling the tree, if possible.
5. If the condition of the tree permits, top it instead of felling the entire tree.
6. Control the fall to prevent the tree or branch from falling or swinging near to a high tension line.
7. Take care to keep entirely clear of the tree or branch as it falls.
8. It may be necessary for your safety to remove a high tension circuit from service before the cutting is attempted. Make sure this is accomplished.
9. Use a safety belt and lifeline when your safety requires them.
10. Familiarize yourself with methods of resuscitation from electric shock.



**SAFETY INSTRUCTION CARD No. 392**  
National Safety Council  
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Figure 9. NSC Safety Instruction Card No. 392.

51. Ventilated storage boxes or fixtures for holding coils of rope should be installed on the trucks so that ropes will not lie on the floor where they may be cut or damaged by sharp tools. (See Figure 6.)

52. Before rope is used, it should be visually inspected along its entire length, and the lays should be twisted open at intervals for spot checking.

53. It is recommended that ends of ropes be whipped to prevent fraying and untwisting of strands.

54. Safe handling of tools. Saws, pruners, and other tools

and equipment should not be carried in the worker's hands while he is climbing. They must be raised or lowered by means of a hand line. A canvas bucket is recommended for small tools. The hand line should be attached at the end of the tool and not in the middle so that the tool will not slip out and fall or become caught in branches.

55. To raise or lower a pole pruner, the rope must be tied below the cutting jaws and not tied to or run through the jaws. Otherwise, if the pole is caught in a tree, the rope may be cut loose and the pruner will drop, injuring workers below.

56. A worker should carry a pruner with the jaw in front of other workmen walking with him.

57. To prevent a saw from falling, it should be provided with a strap or tie rope so that the trimmer can secure it to his belt.

58. All tools should be removed from the tree when the trimmer has finished or when the crew quits work for the day.

59. Axes and hatchets must not be used in trees because of the danger of their falling, injuring workers close by or cutting the supporting life line.

60. Tools should be carried on trucks in racks or tool boxes, with the sheaths or guards in place.

61. *Power chain saws.* Following are a few important rules for operation of chain saws.\* (See Figure 3.)

a. Clear a space in which to work and get secure footing. The engine operator should be on the safer side of the tree.

b. Wear shoes that provide good footing—not shoes with smooth slippery soles. In wet and icy weather, be especially careful of your footing.

c. Do not start the engine and the chain until you are ready to cut. The chain should not be running when it is not in the cut. Stop the motor before you move from one tree to another. Swivel the blade to bucking position (vertical) for transporting.

d. If, in bucking, the saw binds and you want to back it out of the cut,

\* For complete information, see Data Sheet D—W. 12, *Power Chain Saws*.

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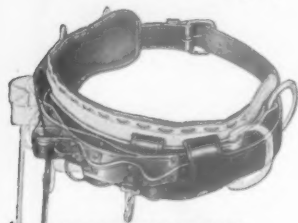
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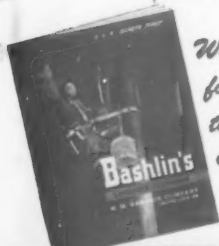
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ground the engine and cut out by lifting on the tail stock end. This method will prevent the engine from kicking back as the chains begin to cut the top.

e. In all types of cutting, keep the horn on the transmission against the log. Use hardwood wedges freely.

f. Never put a chain in the guide rail groove while the motor is running, even if the clutch is disengaged. The clutch should be disengaged when the motor is started.

g. All electrically-operated saws must be well grounded. If a ground is not built into the line cord, a separate wire must be attached securely to the frame and clamped to a low resistance earth ground-rod.

### Electrical Lines

62. All electric wires must be considered live. Workmen should observe the recommended working space as *minimum* clear space adjacent to live parts and should not be allowed to trim within that area. (See Table I.) When securing themselves, they should make certain that they will not swing or fall into the danger zone.

TABLE I  
Minimum Clear Space Adjacent to Live Parts  
Voltage Minimum Horizontal Clearance  
Between Phases of Unguarded Parts  
Feet Inches

Minimum Clear Space Adjacent to Live Parts	Minimum Horizontal Clearance of Unguarded Parts
Feet	Inches
600	3
2300	3
6600	3
11000	3
22000	3
33000	4
44000	4
66000	4
88000	5
110000	6
132000	6

From National Electrical Code, 1951, National Fire Protection Association.

63. Only if a qualified lineman is a member of the tree trimming crew should approved rubber gloves, blankets, and line hose be provided. When this protective equipment is carried on the truck, the lineman should follow regular practices in making field inspections and tests.

64. Pole saws and pruners having dry wood poles and no metal parts should be used to make cuts. Cuts should be made at the point farthest from conductors.

65. If a limb overhangs a wire and can be reached easily from

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a ladder, tower truck, or the tree itself, the foreman should have a qualified lineman cover the wire with rubber protective equipment if the voltage permits. If the wire is between spans or towers, the local utility company should be asked either to move the line or to de-energize it.

66. Only qualified workmen should handle fallen or broken wires. The dangerous area should be roped off or barricaded, the public utility company notified, and a watchman posted to keep the public away until a line crew arrives.

67. All men should be taught the tree top and prone pressure methods of resuscitation and should have frequent practice to develop skill. Tree top resuscitation is the same as the lineman's pole top method. The only differences are in the lowering methods.\* (See Figure 4.)

68. Tree trimming personnel should be familiar with the safety instructions for rescue from live wires, shown on *Safety Instruction Card No. 189*, Figure 7.

#### Removal of Limbs

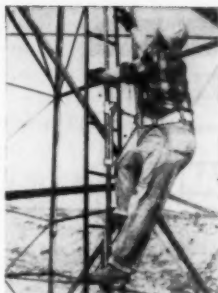
69. Removal of large lateral limbs usually requires roping to prevent damage to the tree or other property and to prevent injury to employees or the public. Limbs that are to be lowered, raised, or swung to the side are roped by the same method.

70. A heavy limb requires three ropes: butt rope, top rope, and guide rope. (See Figure 8.)

71. The *butt rope* is passed through a crotch above the limb to be removed, and one end is secured to the limb near the point where the saw cut is to be made. The other end of the rope is tied to a tree, pole, or other firm support to hold the limb until it is ready to be lowered.

72. The *top rope* is passed through a different crotch, whenever possible above the limb to be removed, and one end is secured near the outer end of the limb. The other end of the rope is tied

\*See Data Sheet D-PU-1, *Pole-Top Resuscitation*.



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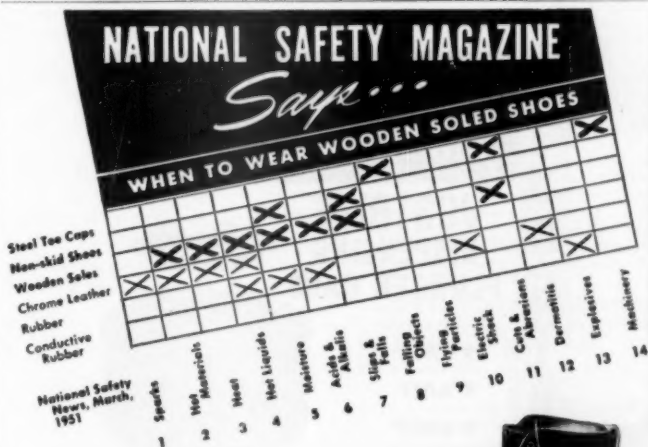
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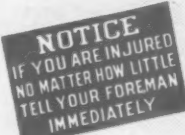
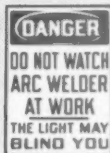
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to a tree or pole until the limb is ready to be lowered. Where a truck is available, the rope can be run through a snatch block at the base of the tree and tied to the frame of the truck for raising or lowering operations.

73. The *guide rope* is fastened near the end of the limb to serve as an aid in pulling the limb around and in guiding it past other limbs or obstructions during the lowering operation.

74. With the ropes secured in place, a preliminary saw cut should be made at least 2 feet from the trunk. When the cut is deep enough to permit the man on the ground to pull on the rope and break the limb, the worker in the tree should move to a safe position where the limb being removed cannot kick back and strike him. This position should never be under the point where the ropes are croched.

75. The man on the ground should use the guide rope to swing the limb to the desired position, and then lower the limb by means of the top and butt ropes. If the limb is heavy, the ropes should be snubbed for lowering.

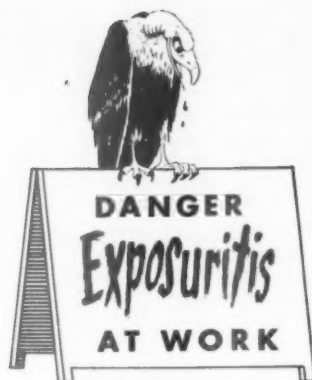
76. If no limb or other tree is available for crothing, the butt rope should be wrapped around a lower stub or passed through a snatch block and lashed to the trunk at a point below the cut.

77. Under no condition should limbs partially sawed through be allowed to remain in the tree overnight or after workmen leave the tree, even if the job is not completed.

#### Felling Trees

78. If a tree is to be felled near overhead wires, the limbs must be stripped high enough that the tree will fall without striking and breaking the wires. (See Figure 9.)

79. No one should work in a tree which might be struck by the one being felled. Workmen felling trees should be required to give ample warning signals, and to keep away from the base as the tree starts to fall so as to avoid unexpected rolls. They should stand to one side, preferably behind another tree when felling leaning



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trees, to avoid the danger of kick-backs. Once the job of felling a tree has been started, it should be completed before the men leave at the end of the day.

80. To prevent accidents and property damage, large trees should be head-guyed. If the tree may fall sideways, it should be side-guyed in both directions.

81. For head-guying, two ropes should be used, one for pulling and the other as an emergency line. The head-guy should be pulled tight before sawing is started so that if it is going to break, it will do so before the tree starts to fall. As sawing proceeds, the head-guy may require tightening to keep it taut. The emergency head-guy should also be kept taut so that the fall of the tree can be controlled should the head-guy fail. If the truck used by the crew is so equipped, a winch line can be used instead of one rope.

**Brush Disposal**

82. Members of the crew who handle brush should be warned to watch that the ends do not strike them on the head or in the face when the brush is pulled from the tree by means of pruners. Men who handle brush should wear goggles or other suitable eye protection. They should not work under a tree which is being trimmed, at least not on the side where the trimmer is working.

83. As soon as brush is removed from a tree, it should be cut up and piled neatly out of the way of traffic, if it is not to be hauled away at once.

84. If the brush is to be burned near the job area, it should be piled in a place away from wires or cables, fences, poles, or buildings. Fire protection equipment should be provided. Brush should not be burned on a windy day where a fire hazard exists.

85. The fire should be extinguished or guarded before the crew leaves for lunch, and extinguished at the end of the work day.

86. When brush is piled on a truck, it should be kept on the bed of the truck. If necessary, it should be held down tightly by means of

**MAN! That's The  
Fastest Drying  
Hand Dryer I've  
Ever Seen!**

**Saves Towel  
& Maintenance  
Expense, TOO!**

**NEW Sani-Dri Brings  
You Basic Improvements  
Never Before Possible!**

Amazingly fast drying time — plus the advantage of cleaner, more sanitary washrooms — make the New Sani-Dri popular wherever it is installed.

Now you can be sure of providing fast, efficient hand drying service... and save continuing towel expense. Saves washroom maintenance costs too! No empty towel cabinets to fill. No unsanitary waste containers to empty or become a fire hazard.

The new Sani-Dri is available in two models — No. 8-SWA Hand dryer for washrooms; and No. 8-SWH Hair Dryer for Shower rooms, pools, etc. Both models are easily mounted to the wall and carry the Underwriter's Seal of Approval. Investigate this new faster-drying Sani-Dri today!

**ONLY SANI-DRI ELECTRIC DRYERS  
GIVE YOU ALL THESE FEATURES**

- New, improved heating element.
- Larger motor and blower than any other dryer.
- Instant Starting — Automatic Shut-off.
- New Circuit-Breaker Prevents Damage.
- Cast Construction... Built to Give Years of Service.

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Send for new illustrated  
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Manufacturers of Stools, Table  
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"Dependable Since 1897"

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# One size fits all!



## HARD\* BOILED

HAT USERS  
SAVE MONEY...

Reduce hat inventories. Headbands sized in one minute. Save Time! Entire headband assembly removed in six seconds...replaced in six seconds. Shapes to the head instantly for "fishing hat" comfort.

Stronger-than-steel molded Fiberglass crowns are the safest ever built; available in your choice of vivid, permanent colors and white or black.

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COLOR CIRCULAR



\*T. M. Reg.

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Distributors in  
principal cities

a rope lattice, tarpaulin, or binding. The brush will then not interfere with visibility, scrape against cars in traffic, strike pedestrians, nor blow off and fall into the streets during transit.

87. The width of the load should conform to local or state ordinances and codes. Wherever brush extends more than 4 feet beyond the end of the truck bed, red flags should be placed on the ends of the brush.

88. Workmen should never be allowed to ride on top of a load of brush.

89. The brush should be unloaded at a distance from fires. The burning ground should be large enough for several piles to be burned at the same time, with enough room for unloading at burned-out spots.

90. The truck should never be backed up to a fire for unloading. If the brush on the truck should catch fire, it might ignite the gasoline in the truck or other flammable materials.

### Public Safety

91. Before tree trimming or removal operations are begun, pedestrians and drivers should be warned by means of red flags and danger signs set up on the sidewalks and in the street in the vicinity of the work to be done. Hazardous areas must be blocked off by barricades or by ropes.

92. When traffic is congested, a man should be stationed with a red flag to direct those who must step into the street to go around the site of the operation. If necessary, local authorities should be called upon to close traffic lanes during operations. Warning lights should be provided in obscure or dark areas.

93. Limbs and other brush should be thrown or lowered by rope away from the street side and off the sidewalk if possible. Otherwise, one man should remove the brush from the sidewalk as soon as it falls there.

94. Tools and equipment should be kept off sidewalks and streets.

### GET THE FACTS!

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### Instant Cooling

## RELIEF for BURNS

All Kinds  
(even acid)

### HAVE YOU TRIED IT?

Write for sample

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Safety Congress  
& Exposition  
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**OCT. 8-12, 1951**

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Emigsville, Pa.

# RIGHT

FOR USE ON WET FLOORS

# RIGHT

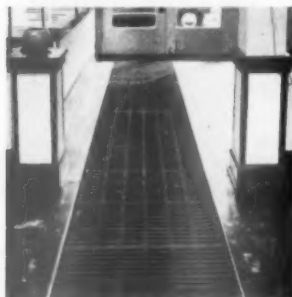
FOR USE AT COUNTERS

# RIGHT

FOR ENTRANCES AND LOBBIES

# RIGHT

FOR SHOWER, LOCKER & WASHROOMS



## AMERICAN Counter-Tred MATTING

The non-slip surface really prevents accidents.

Exceptionally tough and long-wearing under heaviest traffic.

Ridged bottom affords aeration and drainage.

Rolls up for mopping of floor.

Thickness:  $\frac{3}{8}$ ". Width: 2 feet. Any length.

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Please send literature and prices on American Counter-Tred Matting.

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Ropes should be kept coiled to prevent a tripping hazard. Men should use hand lines to raise or lower tools and materials and should make sure the public is clear before they do so.

#### Poisonous Plants\*

95. Poisonous plants will infect nearly all persons on contact. In areas where poison ivy, poison oak, and poison sumac are growing, workmen should become familiar with each and should take special care to avoid contact with them. They should also avoid smoke from burning vines. The smoke carries oil from the plant, and contact with the skin may result in infection. At first signs of infection, workmen should report to their supervisor and get medical attention immediately.

96. Some workmen are allergic to the fine dust or fuzzy substance given off from the underside of the sycamore leaf. Such persons should wear dust respirators when trimming trees in summertime. To avoid this hazard, sycamores can be trimmed in winter.

97. Men should take care in working around honey locust and black locust trees, since they have thorns which cause cuts and scratches in which infections may start.

#### General

98. Men should be called down out of trees immediately upon the approach of electrical storms and should seek shelter, as follows:

- Do not seek shelter under a tree.
- If possible, get into an automobile or truck which is not parked in a wide open space or on top of a relatively bare hill where it is the highest object in the immediate vicinity.
- Keep away from wires, especially wire fences.

99. A well-stocked first-aid kit should be maintained for each crew or work area, and workers should be instructed to report all injuries promptly for treatment, regardless of how minor they appear to be.

\*Data Sheet D-Gen 17, Poison Ivy, Poison Oak, and Poison Sumac.

## SAFETY CAPS for WOMEN WORKERS



No. 1050 HOLLYWOOD VISOR CAP  
Visor for warning signal against machinery. A real safety cap. Made of washable seersucker.



No. 120 HOLLYWOOD TURBAN  
"All-Purpose" Hair Protector. Made of cotton netting. Washable—adjustable. No exposed hair.



No. 1430 HOLLYWOOD NET-VISOR CAP  
White visor with eye-shade green on reverse side. Attached net available in brown, white, blue or green. For light, clean work. Easy and comfortable to wear.

Write for Illustrated Catalogue Showing Complete Line of Safety Headwear for Women.

Hollywood Turban Products Co.  
1104 S. WABASH AVE. CHICAGO 5, ILL.

**Dry cleans  
OILY, GREASY  
SLIPPERY  
Floors!**

Approved by  
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1. Insures against slipping
2. Insures against flash fires
3. Improves working conditions
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Just spread on floor!

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Memphis, Tenn., Cincinnati, Pa.

#### Summary

100. A safe tree-trimming program must include these points:

- a. Safety rules must be established and observed.
- b. Men who meet the requirements of the job must be selected and well trained.
- c. Proper tools and equipment must be provided and maintained in good condition.
- d. Safe methods of using equipment must be determined and instructions given.
- e. First-aid service must be provided.
- f. Records of accidents must be kept.

#### ACKNOWLEDGMENT

The first and final drafts of this data sheet were prepared by George MacDonald, staff representative, Public Utilities Section, National Safety Council. Grateful acknowledgment is made to A. B. Larsen, Commonwealth Edison Company, and E. S. Hannaford, Long Lines Department, American Telephone and Telegraph Company, who served as special consultants; to the Engineering Committee of the Public Utilities Section under the chairmanship of P. M. Gentzel; and to other members of the section who assisted. The data sheet was reviewed by the Safe Practices Conference Committee and approved by the Industrial Conference of the Council.

#### Rapid Growth in Isotope Distribution

On the fifth anniversary of the distribution of reactor-produced radioisotopes, the Atomic Energy Commission announced that much of the growth in the isotope distribution program in the past year has resulted from an increased interest on the part of industry.

In these first five years AEC facilities have made over 18,900 shipments of radioactive isotopes and 1,550 shipments of stable isotopes for studies in 1,165 departments in some 610 U. S. institutions. In addition, more than 1,135 shipments of radioisotopes have gone to some 250 institutions in 30 nations abroad, and approximately 4,350 shipments have been earmarked for the AEC's own research activities. These atomic energy by-products are contributing important benefits to medicine and agriculture and to the biological and physical sciences, as well as to industry.

Radioactive cobalt as a source of radiation for the testing of castings and welds symbolizes industry's increasing use of radioiso-

**Asbestos Gloves  
for HOT Jobs**



There's a *Big* difference between Asbestos Gloves and you can *tell* the difference when you get Industrial's 200-14L asbestos gloves. *The quality stands out* in your hands and on your hands. Seamless one piece construction from tip to top. No seams at the wrist or working edges to pull out or burn out just when protection is needed most on a hot job. The 200-14L has a knitted cotton lining (not woven) anchored in each finger and in thumb. *The quality stands out* in the correct design and proportions of the big roomy pattern that allow a cool, comfortable fit. They are double sewn. Standard 11, 14 and 23 inch lengths. Other lengths and many special types of asbestos gloves and mittens are available both lined and unlined. The quality of all these items stands out because they are all made of sturdy, close woven 2½ pound per square yard Underwriters grade Asbestos cloth . . . from the best mills in the United States.

Be safe—use Industrial's Safety Apparel backed by 41 years of experience and know-how that means dependable low cost protection for rough, tough service.

We are designers and manufacturers of a complete line of Industrial Safety Apparel. Write for catalog and tell us your requirements.

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GLOVES COMPANY**  
A CORPORATION

Main Factory: 1741 Garfield St., DANVILLE, ILL.  
(In Canada: SAFETY SUPPLY CO., Toronto)



topes, the AEC Isotopes Division reports. Used in radiographic inspection, the radioisotope cobalt 60 supplies the necessary radiation for taking a photograph of any flaws or cracks not otherwise visible in a cast or weld.

The amount of radiocobalt shipped during the past 12 months, the AEC says, has increased by 564 per cent over the total amount shipped during the first four years of the program. Shipments of the other two leading isotopes, radioactive iodine and radioactive phosphorus, increased 94 and 54 per cent respectively. Some 72 industrial companies are currently using radiocobalt for radiography.

Among numerous new industrial applications of radioisotopes are:

1. A method developed by the Rock Island Arsenal in Illinois for determining the concentration of sulfur in chromium plating baths.

2. A technique used by Carnegie Institute of Technology in Pittsburgh for measuring the self-diffusion of cobalt—important to metallurgists.

3. A test developed by the research laboratories of the Atlantic Refining Co. in Philadelphia for forecasting the extent of deterioration of asphalt roads due to the action of water.

## Calendar Contest Winners for July

First prize in the National Safety Council's Safety Calendar Contest goes this month to Laura Riggs of Eugene, Oregon. The theme in this contest was lift with safety. Miss Riggs' limerick was adjudged best of all those submitted. It was:

*Not mischance, but mis-stance,  
put her here.*

Second prize went to Mrs. H. L. Parks of Muncie, Ind., for this limerick:

*Leave the dust, if you must,  
till help's near.*

Third prize was awarded to Allan A. Owen of New York, N. Y., for the following limerick:

*One can't do what takes two—  
that's now clear!*

Thirty \$5.00 prizes were awarded to: Mrs. C. J. Roe, Tower Hill, Ill. G. E. Gambler, PB&NE RR Co., Bethlehem, Pa.

Mrs. Bill Clayton, Orlando, Fla. Rev. Willis J. Loar, Santa Rosa, Calif.

William F. Roeschel, Westville Grove, N. J.

Mrs. Relis Brown, Appleton, Wis. Arthur L. Handley, Sr., Atlanta, Ga. Ralph J. Detwiler, Richland, Wash. Mrs. Phyllis L. Nerd, Pen Argyl, Pa. Mary Rose Petrik, Topeka, Kan.

S. G. Farmer, Papanui, Christchurch, New Zealand, Firestone Tire & Rubber Company of N. Z.

E. M. Segel, Denver, Colo. Mrs. L. A. Agniel, Jefferson City, Mo. Alicia Grimm, Buffalo, N. Y.

Mrs. Muriel G. King, Trail, B. C., Canada. The Consolidated Mining and Smelting Company of Canada, Ltd.

Mrs. Leafy V. Crummett, Head Waters, Va.

Jack Hendrickson, San Diego, Calif. Mrs. Bernice Cameron, Worcester, Mass.

Mrs. Harriet B. Harmon, South Bend, Ind. Portage Oil Corp.

Marie Slechta, Washington, D. C. Mrs. Marion Douglass, Portland, Ore. Dorothy B. Schlaikjer, Manhasset, N. Y.

Mrs. Francis Walker, Waterloo, Iowa. Mrs. Imogene Wilson, Dallas, Texas. Mrs. Randolph Burdick, Couderport, Pa.

Mrs. T. A. Grove, Dayton, Ohio. Ken Bailey, Rutland, Vt., Fellows Gear Shaper Co.

Mrs. W. M. Wilson, Louisville, Ky. Helen W. Traver, Hartford, Conn. J. D. Tanner, Stillwater, Okla., Maze Ptg. Co.

Speaker: "Perhaps I have talked too long. I forgot my watch and there's no clock in this hall."

Voice from the rear: "There's a calendar on the wall behind you."



## Stop spills, save skilled workmen with "Safety-Walk"

Now "Safety-Walk"—a tough mineral-coated fabric with a stick-at-a-touch adhesive backing—makes it easy to get safe, sure footing on catwalks, steps, ramps and walkways. It's available in four colors, many sizes and shapes to fit your exact needs.

### FREE SAMPLE

Try "Safety-Walk" yourself! Easy to apply... strip off liner and press in place. For free sample and complete information write: Minnesota Mining & Manufacturing Company, Dept. 5-91, St. Paul 6, Minnesota.



Made in U.S.A. by MINNESOTA MINING & MFG. CO., St. Paul 6, Minn. also makers of "Scotch" Brand Pressure-sensitive Tapes, "Scotch" Brand Recording Tape, "Underseal" Rubberized Coating, "3M" Abrasives, "3M" Adhesives. General Export: Minn. Mining & Mfg. Co., International Division, 270 Park Avenue, New York 17, N. Y. In Canada: Minnesota Mining & Mfg. of Canada, Ltd., London, Canada.

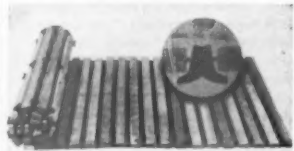
### Finest Floor Mat Made



### CUSHIONED MAT

DEALERS IN  
MOST MAJOR CITIES  
OR WRITE DIRECT

80 Cents per Sq. Ft.  
in Standard Sizes



**SOUTHERN  
MANUFACTURING COMPANY**

1814 Desiard St.  
Monroe, La.



# NEW SAFETY EQUIPMENT FOR INDUSTRY

Further information on these new products and equipment may be obtained by writing direct to the manufacturer. It will help in identifying the product to mention this announcement.

## Rubber Frame Goggle

A new rubber frame goggle, designed to provide a gas-tight seal and recommended specifically for gas, fume and smoke hazards, is announced by American Optical Co., Southbridge, Mass.



The new 701 goggle is constructed without any ventilation slots in the rubber frame to prevent infiltration of air. When the goggle is perfectly fitted, a gas-tight seal results. Headband of the goggle enters slots in the outer goggle frame and not through a slit in the lens. Screw-headed bolts on the front of the goggle are made of non-corroding stainless steel. The new goggle may be obtained in combination with the Company's R2000 or R5000 respirators. These combinations can be supplied permanently riveted together or as separate units.

## Salt Tablet Dispenser

A new type plastic expendable salt tablet dispenser known as the Crystal-M has been developed by Standard Safety Equipment Co., 232 W. Ontario St., Chicago 10.



The container is clear plastic so that complete contents is visible at all times; contains 1000 enteric coated salt tablets which meet Federal specifications for this type tablet. The entire unit is sealed at the factory giving assurance of unsoiled tablets throughout the life of the unit. A simplified tablet release mechanism has been designed to help keep the cost

down and requires merely slight pressure from finger or hand to release a tablet. Trigger cocks automatically for the next user. The cone-shaped bottom permits easy exit of every tablet.

This expendable dispenser is intended to be discarded when empty. An easily installed bracket arrangement permits quick removal and replacement.

## Cover Lens

American Optical Co., Southbridge, Mass., announces a new plastic cover lens that reduces fogging and is more durable than regular glass. Also announced is a new plastic cover plate which provides greater protection for welding helmet windows.

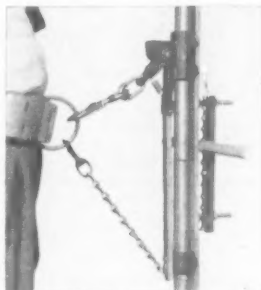
Developed to protect more costly filter lenses from hot metal spatter and scratches, the new cover lens is formed so that the center portion is raised. The air space created between the two lenses automatically reduces fogging to a minimum. The new plastic lens will remain pit-free longer than glass and resists fusion of hot metals and spatter.

The new cover plate for welding helmet windows is made from special thermo-setting plastic, a material that is superior in performance. The new plate is clear, hard and almost colorless, possessing surfaces comparable in smoothness, lustre and chemical resistance to polished plate glass. It is more resistant to pitting than glass, will not discolor under ordinary welding conditions and will not peel, crack, blister or shrink in service.

## Safety Device for Ladders

A new device for the prevention of falls from ladders has been developed by Safety Tower Ladder Co., Burbank, Calif. The design is simple and can be used by an inexperienced climber with safety because the device locks instantly when he slips and limits the total fall to six inches. It holds until he recovers from the slip.

The device consists of two principal parts: Safety pipe assembly and the sliding safety sleeve with Safety Belt. The



pipe assembly is fastened directly to the ladder, rung, peg, lacing bars or framework. Fasteners are provided with the safety pipe for installation without welding, cutting, drilling or altering ladders or

towers. Installation is fast and inexpensive. Three men can install 100 feet in approximately 2 hours. The lower end of the safety pipe is installed about 3 feet from the ground. It is centered on the ladder and is assembled continuous to the top of the ladder and if the ladder is staggered, each section forms a complete ladder. Each section of pipe is 20 feet of 1 inch galvanized with beveled notches cut into the face of it at 6 inch intervals for stopping the safety sleeve and climber from falling. Each 20 foot section is fastened to the ladder in three places by bolting and is aligned with the section below by a pipe spud.

The sliding safety sleeve is the portable part and the operating mechanism. It slips onto the guide rail of the safety pipe at top or bottom and the climber snaps it onto the D-ring of his safety belt. He climbs in a normal position and the sliding sleeve moves with him without hindrance. The locking mechanism stays open as long as he climbs up or down in the normal position. If he slips, the locking trigger of the safety sleeve automatically goes into action and contacts the notches of the pipe to stop the fall at a 6 inch maximum limit. Sliding sleeves can be mounted on or removed from the pipe at the top or bottom or they can be left hanging in place on the pipe while the worker goes around the tower. The device is unaffected by rain, ice, mud, slime or oils and grease. Deterioration is minimized by the use of hot dip galvanizing on all steel parts after finishing. The working parts are manganese bronze with over 60,000 lbs. tensile. The device can be used on all fixed ladders above or below ground level.

## Hand Truck

Magline, Inc., Pinconning, Mich., announces the addition of a new model to their line of magnesium hand trucks. This new, light-weight model, weighing only 19 pounds, incorporates a re-designed nose unit, extending beyond the wheel on either side. This development eliminates the possibility of flexible loads binding on the tires. The new design also features the addition of two magnesium strips, placed along the frame member. This feature gives the truck a greater degree of usefulness, as both large and small package units may now be handled with equal facility, by the same piece of equipment.



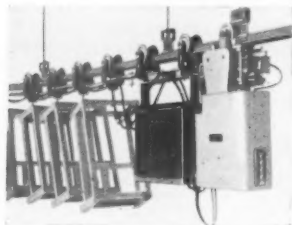
# NEW SAFETY EQUIPMENT FOR INDUSTRY



Manufacturers are invited to send in announcements of new products, or improved special features. Only items which can be considered as "news" to our readers will be published.

## Overhead Conveyor

The Bloom System, Inc., 19431 W. Davison Ave., Detroit 23, Mich., has announced the development of a new overhead conveyor system. Called Mono-Dyne, the new unit is battery powered, making it independent of any outside source of energy. Because the driving power is self-contained and travels along with the conveyor itself, the system is not subject to the usual



limitations of an ordinary electrified system. By eliminating the need of overhead wiring, the system can be installed at a considerable savings. The nature of its design is such that it can be easily incorporated into present manually operated systems, thereby making them power operated. The unit is capable of mult speeds, forward and reverse, and is operated by push button control or remote control, if desired. It can operate outdoors, from plant to plant, as well as inside, and is capable of ascending grades. The manufacturer states the system may be used for production line conveying, materials handling and for the general transportation of materials and goods within a building or between buildings.

## Dust Controller

The Day Co., 810 Third Ave., N. E., Minneapolis 13, Minn., manufacturers of dust-control equipment, announces the building of a new unit dust controller designed to operate as an independent unit and provide maximum dust recovery over



a wide range of volume at low operating cost. These units are especially desirable and very practical in plants where central dust control systems are not feasible. They are also designed to solve the dust problem at dust points too far removed from a plant's central dust control system.

The unit dust controller incorporates the dual-clone dust separator

and the Day exhaust in a self-contained, compact dust-control unit. The air-dust separation which takes place in the unit controllers is explained by the manufacturer as a patented two-stage action utilizing internal skimmers. The dust-laden air enters at the side of the unit and spirals smoothly down to the cone outlet. As the cleaned air spirals up through the internal skimmer stack, most extra fine dust particles, carried upward with the outgoing air, are concentrated by the tapered stack. Here they are skimmed off and returned to the dust outlet.

The smooth, continuous, streamline air travel from inlet to outlet eliminates power-consuming eddy currents and back pressures caused by changes in air flow direction. The unit operates at six inches external static pressure, and the fan can be discharged at any 45 degree interval. Units are available in four sizes from 500 to 2,000 CFM, and can be furnished with or without secondary filters.

## Plastic Work Glove

The Milburn Co., 3246 E. Woodbridge Ave., Detroit, has announced the development of a new "Rough-Palm" surface plastic glove which not only reduces slipping where even the most oily sheets are handled, but it also out-wears normal plastic coated, leather and neoprene gloves in the handling of sharp-edged materials. The new glove is extremely heavy duty



but maintains the characteristic lightness of all plastic coated materials. It is free of skin irritating properties which enables the worker to wear the gloves through a full working day.

Designated by the model number, B-2100-N, the "Rough-Palm" is available at the present time in the knit wrist style only. Other styles such as gauntlet and safety cuff are promised shortly.

## Safety Signs

A new line of danger, caution safety signs with special warning messages and directional signs is announced by Eastern Metal of Elmira, Elmira Heights, N. Y.

These signs which are bright in color are lettered in accordance with American Standards Specifications and U. S. Department of Commerce. These signs are built for rugged service of heavy-gauge steel, with a flexible baked enamel finish to resist weather and other destructive elements. This company also manufactures traffic signs and has recently introduced a special "A" Standard with a wide frame base which does not blow over in strong winds or from the backwash of passing trucks.

## Cleaner and Sanitizer

A new odorless general purpose liquid cleaner and sanitizer for industrial use, combining a quarternary ammonium compound and a compatible synthetic detergent is now being manufactured by West Disinfecting Co., 42-16 West St., Long Island City 1, N. Y.

Known as Sanikleen, this new product permits cleaning and sanitizing in one economical operation. An equally effective cleanser in hard or soft water, leaving no residual soap film, the product can be used for cleaning walls, windows, dishes, glasses, eating utensils, and floor surfaces of wood, concrete, linoleum, asphalt tile, terrazzo and similar materials. When Sanikleen is used according to directions, the sanitizing properties reduce the amount of bacterial contamination to a point considered safe by public health requirements. Tested for toxicity, the product has been found safe in this respect, making it suitable for use in dairies, food plants and similar places where low toxicity is a prime consideration. Since the synthetic detergent is almost neutral in pH, the new product is less alkaline than comparable soap solutions. The tendency to become irritating to the skin and to discolor certain wall and floor surfaces which alkalinity may cause is thus reduced. One ounce of Sanikleen per gallon of water is sufficient for general use. Surfaces may be mopped, scrubbed, or brushed with this solution; for heavy-duty cleaning the concentration may be increased.

## Spark-Enclosed Gasoline Truck

Yale & Towne Manufacturing Co., Philadelphia 15, announce that their gasoline fork trucks are now available in spark-enclosed models. The new trucks are designed to provide the maximum possible safety operation in gas and dust laden areas, and are designated as Underwriters' Laboratories Type GS.

Protection has been accomplished by shielding the electrical equipment against sparking, by providing a water-type ex-



# NEW SAFETY EQUIPMENT FOR INDUSTRY

Further information on these new products and equipment may be obtained by writing direct to the manufacturer. It will help in identifying the product to mention this announcement.

haust manifold, by providing a water cooled muffler, and by using static conductive tires. Trucks so equipped will not readily be a source of ignition of any vapor due to electrical sparks, hot metal surfaces, exhaust gases, or backfires.

The fuel tank is of heavy welded steel construction, surrounded by strong structural members as protection against rupture. A special filler cap which seals automatically is shielded from the engine compartment so overflow cannot drop on electrical system of hot engine parts. An up-draft carburetor with a leak-tight metal air horn is connected directly to an air cleaner of the backfire arrestor type. The exhaust manifold has a water jacket designed to keep exhaust system and engine surface temperatures low. All low tension wires and cables are enclosed in flexible non-metallic tubing with metal enclosures to receive wires and terminal connections. All wires and cables are securely held to prevent chafing due to vibration and are located with safe clearance from any moving parts, hot engine surfaces, exhaust and fuel system lines. Conductive tires are used to prevent a static spark discharge between the truck and floor.

## Storage Bins

Industrial Products Co., 2850 N. Fourth St., Philadelphia 33, announces a new line of safety storage bins designed for shipping and receiving rooms and other plant areas where excelsior, paper, rags, paint and other combustibles are used. Bins are made of heavy gauge galvanized iron



with reinforced angle iron corners and fitted with fusible link so that cover is allowed to close automatically in case of fire. The bins are made in three sizes, 20 x 35 x 33 inches; 21 x 48 x 37 inches and 24 x 58 x 37 inches.

## Electric Gate Operator

An automatic all-weather protective gate operator for internal security or privacy for commercial and industrial plants, estates, farms and institutions has been announced by Electric Power Door Co., 2127 East Lake St., Minneapolis 7. Marketed as the Electric Doorman Swinging Gate Operator, the device supplies automatic power for existing double or single swinging and sliding gates. Gates can be opened and closed by guards by simple



button controls. Plant executives may also control gates by "Radiomagic" remote control from their cars.

Standard time to open or close double swing gates, either in or out, is 5 to 8 seconds. Special controls include radio control, key post switch, electric eye, pull cord and ground trip. Gate operators come furnished with rugged steel mounting channels, weatherproof heavy gauge steel covers, safety clutch, thermal overload, heavy duty double wound motor and adjustable limit switch. All exposed parts are rust-proof, and operators may be easily disconnected in case of power failure.

Illustration shows an installation at Minneapolis-Moline's Minneapolis Como Plant.

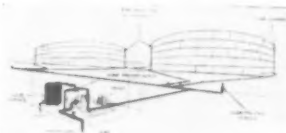
## Floor Matting

The Ace Hose & Rubber Co., 1706 S. State St., Chicago, has entered the industrial and store market with a new idea in floor matting. Called "Lite Step" and featured for its anti-fatigue qualities, the new mat presents a combination of 1/4 inch corrugated rubber top welded to a 1/4 inch live sponge rubber base. The mat, which comes in all lengths and up to 72 inches in width, is intended for both back-of-the-counter foot comfort as well as production-line working ease.

In addition to its contribution to comfort, the new matting will not slip or slide, is thicker than similar corrugated mats, and is claimed to be exceptionally tough and long lasting. Also easily washable, odor-free and resistant to most ordinary chemicals.

## Fire Protection Line

Storage of flammable liquids for use in industrial production creates fire hazards that often are inadequately provided for. Walter Kidde & Co., Inc., Belleville, N. J., producers of carbon dioxide systems, has developed equipment to extinguish fires resulting from handling and storage of flammable liquids designated as mechanical foam systems, particularly suited to this type of hazard. Generally, operation of a mechanical foam system depends on normal plant water pressure to draw, mix, and deliver the fire extinguish-



ing agent. In large installations where main pressures may be inadequate to do the job, special pumping may be required.

The components of foam are water, foam liquid, and air. The basic mechanical foam system starts with water under pressure passing through pipes or hoses. The velocity of the water creates a vacuum which draws the proper amount of foam liquid from its storage chamber into the stream. Further along, a second vacuum is created which pulls air into the water-foam solution. Then it is immediately mixed, creating fire-killing foam, and is discharged over the burning liquid from either manually controlled hoses or fixed units. While requirements of a particular installation may vary the spacing between introduction of foam's elements, its mixing, and method of discharge, the same basic pattern is followed.

Illustration shows a typical mechanical foam installation for protection of tank stored, flammable liquids. The flexible system is easily adapted to either large or small storage tanks.

## Defense Light

A new automatic emergency hand lamp that plugs into any 110-volt A.C. wall outlet and furnishes instant, automatic emergency lighting when the regular source of current fails is announced by Electric Cord Co., 195 William St., New York 38. Adjustable 21 C.P. flood type head is designed to fit Burgess 7 1/2 volt battery or equal. Can be manually operated for use as a hand lamp.

# NEW SAFETY EQUIPMENT FOR INDUSTRY



Manufacturers are invited to send in announcements of new products, or improved special features. Only items which can be considered as "news" for our readers will be published.

## Sprinkler Head

Rockwood Sprinkler Co., 38 Harlow St., Worcester 5, Mass., announce their new T-Head sprinkler designed to give better distribution of water and better control of fire with less water and requiring fewer heads to control fires.

The head is engineered and designed for use in fixed piping systems. It has a directional wide angle, medium velocity



discharge and is installed in a pendent position. It is recommended for automatic as well as open deluge use. The head can be used as either a sealed or open head. The sealed head combines the principles developed in WaterFOG. It has a full side opening for discharge of water. The design of the head brings up the water into a fog pattern fine enough to fill the area from the ceiling down to the floor and heavy enough to drive the particles down to any fire on the floor.

If the fire starts on the floor, the hot gases mushroom up in an inverted cone. The nearer the ceiling, the wider the cone. This head has a wide angle distribution without voids in the area near the ceiling. It prevents gas and flame from rising and also prevents them from mushrooming and needlessly opening adjacent heads.

## Hand Soap

A new powdered hand soap, called Germisoap, which cleans, degerms and conditions hands in one single operation, is announced by Skotch Products Corp., Cleveland 13, Ohio.

The product is non-toxic, penetrates the skin pores and adds a "film of antiseptic protection." The super-fatted skin conditioner is pure lanolin which is fused in, so that the final compound is free flowing. The soap has a pH of 9.5 to 10 and is available with a choice of several granulations for heavy, medium and light duty.

## Cover for Plier Handles

Mathias Klein & Sons, 3200 Belmont

Ave., Chicago 18, now offers a plastic cover that slips onto plier handles, giving a firm, comfortable non-skid grip.

These covers are of transparent plastic in bright maroon and available in 3 sizes: No. 60 to fit 6 inch pliers, No. 70 to fit 7 inch pliers, and No. 89 to fit 8 and 9 inch pliers. The flexibility of the material permits it to conform to the shape of any side-cutting plier handle, assuring a tight fit.

## Floor-Stripe Tape

A new method for marking trucking lane and safety area stripes on the floors of industrial plants and warehouses, was announced by Minnesota Mining and Manufacturing Co., 900 Fauquier St., St. Paul 6, Minn.



The manufacturer states that tests show that the new method—using "Scotch" brand plastic film tape No. 471—will outwear sprayable or brushable striping materials. The tape can be applied by a firm's own maintenance men, without loss of employee or trucking time in the taped-off areas.

Other advantages are resistance of the tape to acids, alkalis, water, salt water, alcohol, and hydrocarbons such as gasoline and kerosene. Ability to alter marked-off areas without leaving traces of the former stripe; extreme ease with which damaged areas can be repaired or replaced; lack of floor ridge, due to tape's thinness; tape's pressure-sensitive adhesive grips immediately upon contact. Seven colors to help identify specific floor areas such as red for danger areas, canary yellow for safety zones, etc., are available. Other colors include white, orange, blue, green, brown and black. The tape is available from

paper, mill supply and hardware jobbers, in 2-, 3-, and 4-inch widths on 36 yard rolls.

## News Items

American Wheelabrator & Equipment Corp., Mishawaka, Ind., has reorganized and expanded its sales staff at the executive level according to Otto A. Pfaff, President. The firm manufactures dust and fume control equipment for general industrial ventilation. Personnel changes and additions are as follows:

L. L. Andrus, formerly vice-president in charge of sales, is promoted to vice-president and executive head of the Dust & Fume Division.

John A. Silver has been appointed director of sales. He was formerly with Lester and Silver, management and sales consultants of New York and Philadelphia.

E. B. Rich, Chicago representative of the Company, becomes general sales manager.

A. E. Lenhard, advertising and sales promotion manager, assumes new responsibilities.

S. S. Deputy, sales manager, will work closely with the General Sales Manager on special assignments.

Bernard Lester, of Lester and Silver, will continue as a sales management consultant to the Sales Division and to general management.

\* \* \*

The Alan Wood Steel Co., Conshohocken, Pa., celebrated the 125th Anniversary of its founding in July. The company traces its origin back to 1826 when James Wood and his son, Alan, grandson and great-grandson respectively of a Dublin Quaker immigrant, leased what was then known as the Delaware Rolling Mill, at Wooddale, five miles northwest of Wilmington, Del. Five years later, James and Alan Wood moved to Conshohocken. From the Delaware Mill and the little Conshohocken mill of 1832 derives the present company.

The measure of the company's progressiveness and confidence is its substantial expenditure for additions and improvements in recent years. Net property value has more than doubled in the past four years. In 1950 more than \$2,500,000 were spent for additions and betterments to bring such total expenditures in the last five years to about \$21,000,000. An outstanding characteristic of this company is the increasing emphasis it is placing on specialties. A few decades ago the company produced but one specialty—pattern floor plates. In 1937 cut nail machines were installed for the manufacture of cut steel nails. Since then a number of spe-





# NEW SAFETY EQUIPMENT FOR INDUSTRY

Further information on these new products and equipment may be obtained by writing direct to the manufacturer. It will help in identifying the product to mention this announcement.

cialties have been developed. The newest development is "Algrip," an abrasive rolled steel floor plate.

\* \* \*

Formation of an Industrial Sales Division of The Cleveland Chain and Manufacturing Co., Broadway & Henry Sts., Cleveland 5, is announced by James W. Dickey, vice-president and general manager.

Headed by C. J. Gerker under the general supervision of David J. Gemmell, vice-president and director of sales, the new division was created to better serve the special needs of industrial chain users. The new department offers the services of three consulting engineers, available to work with mill supply houses and industrial concerns on any problems involving sling chains and other industrial chain users. Mr. Gerker's experience includes more than 20 years with George Worthington Co.

\* \* \*

Ampeco Metal, Inc., 1745 S. 38th St., Milwaukee 46, Wis., announces the appointment of Harry Nowicki as district manager of the company's Eastern Texas Division with headquarters at Houston. He formerly was a field engineer in the Chicago district office.

Sam Coddington, Wisconsin District field engineer has been transferred to the Chicago district to replace the vacancy left by Mr. Nowicki.

Ampeco also announces the appointment of the R. J. Greer Equipment Co., 116 S. Salina St., Syracuse, N. Y., as distributor for their line of resistance welding electrodes. They will include the State of New York, except metropolitan New York, as their territory.

\* \* \*

Bausch & Lomb Optical Co. has been granted a non-exclusive license to produce high-energy X-ray and gamma ray absorbing glasses covered by U. S. Patent No. 2,518,194 granted to Joseph J. Rothermel, Kuan Han Sun and Alexander Silverman August 8, 1950. Dr. Joseph J. Rothermel, Powder House Road, R.D. 3, Corning, N. Y., has been authorized to negotiate contracts for the patents. The slow neutron absorbing glass recently developed by Laben Melnick, Hurd W. Safford, Kuan Han Sun and Alexander Silverman is also available for licensing. Laben Melnick, 5623 Callowhill St., Pittsburgh 6, Pa., has been authorized to represent this group.

A new sound motion picture in color on

the application of industrial trucks and hoists is available from Yale & Towne Manufacturing Co., 11,000 Roosevelt Blvd., Philadelphia 15. Designed for showings before materials handling, warehousing, traffic, methods, engineering and general business groups, the 22-minute film shows a wide variety of attachments on the respective trucks for handling bulk materials, bales, kegs, boxes, rolls, bins, etc. Because of its general nature, students and other college audiences will find much of value in the new film, too.

\* \* \*

W. E. Noyes, vice-president in charge of sales of The Diversey Corporation, Chicago, manufacturers of cleaners and disinfectants for industrial and institutional sanitation and maintenance, has made two additions to his executive staff and named three new district managers for the field service organization.

J. A. McMurtry, district manager in the Cleveland Division for western Pennsylvania and eastern Ohio since 1948, has been appointed assistant to the general sales manager.

Also, given the same status was R. J. Stell, who had directed Diversey's Technical Development Department since 1948.

A. B. Dressman, territory representative in Charleston, W. Va., for the past three years, has been appointed to succeed McMurtry as district manager for western Pennsylvania and eastern Ohio.

With Headquarters in Dayton, M. H. Thornburg, senior salesman since 1948, has been named manager of a newly-established sales district for western Ohio.

J. O. Slaybaugh, a senior salesman in the Pacific Division since 1947, has been made manager of the newly-created northern California sales district. He will work under assistant Division Manager R. C. Perry, who has charge of sales for the entire state of California. Mr. McMurtry joined Diversey in the summer of 1945. Upon completion of the sales training class he was assigned as a territory man to sell in Pittsburgh and environs. In the fall of 1948 he was promoted to his district managership.

Mr. Stell began as an engineer in the Technical Development Department in 1946 and in 1948 director of the department.

Mr. Dressman came to Diversey three years ago with a broad background in dairy and industrial sales. He was assigned to the Charleston, W. Va., territory upon completion of the sales training course.

Mr. Thornburg joined Diversey in 1944

and was assigned as a field service representative to the Dayton sales territory in the Cleveland Division. Four years later he was promoted to senior salesman.

Mr. Slaybaugh had been with the company about a year when he left in 1942 to join the armed forces. He rejoined Diversey in 1945 when the war ended and was promoted to senior salesman for the Los Angeles sales territory in 1947.

## Safety Record Earns Premium Refund

A check of more than \$33,000 was presented recently to Chester F. Hockley, chairman and president of The Davison Chemical Corporation, by William Harper, president of the Maryland Casualty Company, representing return premium earned by Davison in the twelve months to October 8, 1950, under the company's workman's compensation insurance coverage.

Mr. Harper said the return premium, in percentage, was one of the largest ever made by his company. It reflected the excellent safety record made by Davison plants at Curtis Bay, Baltimore; Bartow, Florida; Nashville, Tenn.; Perry, Iowa; New Albany, Ind.; New Orleans, La., and Savannah, Georgia.



"Tell him we're not interested in either measuring, controlling or recording the heat down here!" (Courtesy Wheelco Instruments Company)

# TRADE PUBLICATIONS

## *in the Safety Field*

These trade publications will help you to keep up-to-the-minute on new products and developments in industrial health and safety equipment. They are free and will be sent by manufacturers without obligation to readers of NATIONAL SAFETY NEWS who are responsible for this work. Send in the coupon below checked for the publications you desire. Please make your requests promptly.



1. **Wire Rope Slings:** Literature on ACCO Registered Wire Rope Slings. Strand-Laid; Cable-Laid; 6-Part Braided and 8-Part Braided, all made from preformed wire rope to suit any and all industrial jobs. Custom-made slings on special order. Rated capacities are based on 5 to 1 safety factor. American Chain & Cable Co.

2. **Floor Facts:** A guide for treatment and maintenance of all types of floors. Emphasizes the non-slip qualities of Ves-Cote, which contains Ludox, colloidal silica, a new Du Pont product. Tested and listed by Underwriters' Laboratories. Vestal, Inc.

3. **"Eyes Right for the Job":** Brochure with complete details on Occupational Vision service for preliminary and periodic testing of workers. Plan tells how easily vision service can be administered in your plant. Bausch & Lomb Optical Co.

4. **Industrial Work Gloves:** Colorful new catalog showing the entire Hood line of rubber, neoprene and plastic gloves for every job. Hood Rubber Co.

5. **"Fact Folder on Safety Floorings":** Describes and illustrates use of Fera-Mat, Ferroco, and wide-range of non-slip trends and plates, including Feralun, Bronzalun and Alumalun for safe walk-way surfaces. American Abrasive Metals Co.

6. **"Sling Chains—Care, Use, Inspection":** New informative booklet setting forth the Here-Alloy advantages and features in slings for all industrial purposes. Columbus-McKinnon Chain Corp.

7. **"Plant Protection for National Defense":** A revised manual of instructive information to guide watchmen, guards and management engaged in defense work. Also details on the Guardsman Watchclock System for all plants. Detex Watchclock Corp.

8. **"Junkin Safety Guard":** A new bulletin on automatic safety guards for presses. Features guards which operate automatically from foot pedal, fall by gravity to holster plate. Junkin Safety Appliance Co., Inc.

9. **Industrial Floor Care:** A new 2-page bulletin complete with illustrations, diagrams and case histories, describes a new technique for the care of heavy traffic floors, including asphalt tile and hardwood. The process eliminates use of water or detergents; wax is applied dry by a revolving cylinder which simultaneously polishes the floor. G. H. Tennant Co.

10. **"How to Prepare Your Plant for Atomic Attack":** A 32-page illustrated booklet on industrial plant security in the atomic age, designed specifically for industrial management and safety personnel. In simple language the booklet presents the latest factual information about the atomic bomb, its destructive potential, and its limitations; a guide to plant management in organizing personnel to cope with potential disasters. Walter Kidde Co.

11. **"Solving Roof Problems":** An illustrated booklet with a convenient summary for those responsible for the maintenance of buildings. Shows different safeguarding methods in relation to lasting and economical roof health. Articles on various types of roofs, planning roof repairs, when to discard built-up roofs and many others. The Tremco Mfg. Co.

12. **Fire-Fighting Apparatus:** A fully illustrated catalog featuring fire-fighting equipment and accessories used in all phases of fire-prevention work. Extinguishers, alarms, hose, firemen's clothing, etc., are among the featured products. M. L. Snyder & Son.

13. **"Don't Throw Them Away!":** Circular on industrial cleaning, reclaiming and processing gloves, aprons, rubber and

leather goods of all types for use over and over again. Wash-Rite Co., Inc.

14. **"Over the Rough Spots":** A pocket-size, 32-page booklet which gives a quick analysis of flooring problems. Graphically illustrated, it tells where to look for and how to correct bad floor conditions; how to protect both concrete and wood floorings and maintain proper repair. Stonhard Co.

15. **"Electric Doorman":** A new four-page bulletin describing the Electric Doorman Swinging Gate Operators for use in commercial businesses, industrial plants, institutions, grounds, etc., for internal security or privacy. Also illustrates and describes the Gate Operators that supply automatic power for existing double or single swinging and sliding doors. Special controls shown include radio control, key post switch, electric eye, pull cord and ground trip. Electric Power Door Co.

16. **Traveloader:** Bulletin No. AD-30A on the Lull Hydraulic Traveloader. Shows how one man with one machine can eliminate waste motions in loading, transporting, and unloading or stacking materials. Bulletin also shows attachments that may be added for the handling of reels, unloading pipes from gondolas and other unusual applications. Lull Mfg. Co.

17. **Lift-O-Matic:** Illustrated folder on Materials Handling Hand Truck for use in lifting different size loads. Designed and constructed to eliminate the use of hooks, "prolonged noses," and additional manpower in moving containers with chimes. Marvel Industries, Inc.

18. **Screw Drivers:** A 32-page full color screw driver catalog-handbook. Containing facts and vital data, also complete array of screw drivers, nut driver kits and other hand tools. Particular attention is called to the handy screw chart of all types and sizes of screws for quick and ready reference. Vaco Products Co.

## NATIONAL SAFETY NEWS

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SEPTEMBER, 1951

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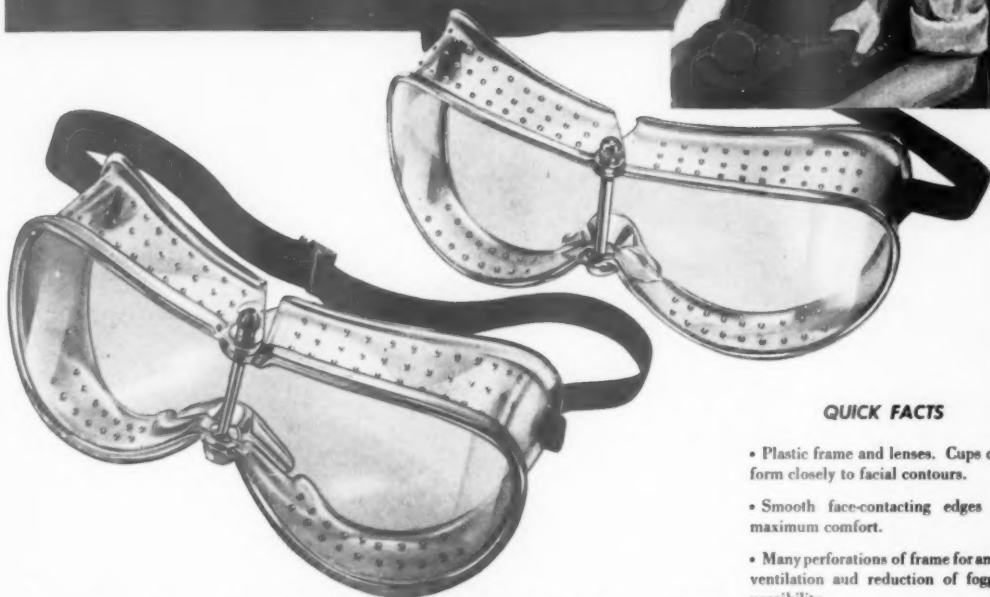
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